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THE

USE OF THE BODY

IN

RELATION TO THE MIND.

BY

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"How in safety best we may
Compose our present evils, with regard
Of *what* we are, and *where*."

MILTON.

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PREFACE.

THIS volume was written with the hope of promoting the study of a subject, than which, as there is none more important, so there ought not to be any of greater interest; for the right use of the body involves the whole doctrine of human economy, in regard both to sociality and to self, not only in relation to time, but also to eternity. The object has not been to produce a systematic treatise, the formality of which would be repulsive, except to a few, but, in a series of cursory, and yet connected essays, familiarly to invite public attention to those things, some knowledge of which, although quite overlooked by the majority of mankind, is essential to individual prosperity. The topics are presented as they were felt by the author, in the study and practice of his profession; and much of the work consists of moral deductions from physiological facts, which certainly demand profounder investigation than this work admits. The subject is, indeed, of immense extent, and in many respects abstruse; this, however, is no

reason why we should be content to remain in ignorance of it, but, rather, the reverse, since truth is always worthy of our highest regard, and a mind duly impressed with a sense of its value can by no means shrink from effort, since without it no permanent moral advantage can possibly be obtained. Readers, as well as authors, are bound to think; and, though they feel their deficiency, still to take courage from the fact, that, if they possess any mental power, they have always the means of getting more, since it will grow if it be but rightly employed, and thus, at length, convert difficulties into delights, and exertion itself into enjoyment. We can not lose our reward in considering the subject before us, because the discoveries we shall make will be worth far more than the trouble; as Sir Thomas Brown says, "While I study to find out how I am a little world, I find myself something more than the great one." Warburton justly remarks, that, "of all literary exercitations, none are of so immediate concern to ourselves as those which let us into a knowledge of our own nature; for these alone improve the heart, and form the mind to wisdom." Ignorance, indeed, is only a little less injurious than the abuse of knowledge; and as the most pernicious ignorance is that which conceals the

claims of God upon our spirits, so the most destructive perversion of intelligence is that which, like an angel of darkness disguised in light, invests moral falsehood with the appearance of moral truth. The only proper method of avoiding, or, rather, of meeting and subduing, both these imminent evils, is humbly to learn and hopefully to apply the momentous truths which our Maker places before us, both in science and in revelation. The attempt to separate the latter from the former is like attempting the removal of the sun from the planets: they belong to each other, and are bound together by the light that dwells among them. We are endowed with faculties both for divine and human associations, and hence we can acquire a knowledge of all that concerns our well-being with regard either to this world, or that toward which we are hastening.

But certain timid and bewildered, yet trim and trite persons, imagine that to treat a scientific subject religiously is to assume too much of the clerical and sacred character of appointed ministers. But can it, indeed, be deemed that to think, feel, act, and speak, according to the dictates of divine truth and the highest knowledge, are the prerogatives of any particular class of men? Surely that intelligence must be

barren and bare—utterly without leaf, flower, and fruit, lifeless as a tree of charcoal—which is not rooted in faith, and derives not vigor from the stream of life and the breath of heaven. Science without Religion is insane, Reason without Revelation gropes about in the dark, and Philosophy loses her holy ordination as priestess of the Most High, unless she be faithful in her office, as the bearer both of incense and of light. In short, Ignorance offers only an offensive oblation to the Almighty, while Folly profanes every thing within her reach. But Wisdom, finding all the universe sacred to the glory of God, calls upon man, at all times and in all places, to walk in sanctity and worship.

The physical and spiritual worlds are in perpetual connection, and all our true interests are essentially religious because they are everlasting; therefore, to separate true knowledge from devout feeling is to divorce what God has joined together, and thus produce a profane severance, like that of faith from love, which, as it begins in distrust, must end in malevolence.

He who is not desirous of looking forward with serene hope to a better state of being, while in the midst of the trials and mysteries of the present, will, it is hoped, find but little in this work to his taste; and yet, if it be true that

nothing is really interesting to man but what appertains to his own nature, there is reason to believe that the facts and suggestions herein offered will possess sufficient claim upon his attention. If this work serve to direct the reader's mind rightly forward in his search for imperishable truth, in dependence on the Might which made him, its best purpose will be fulfilled, and the defects visible in its pages will provoke no severe judgment from the feeling that it is auxiliary to advancement in that inquiry which will ultimately receive a satisfactory response.

A more precisely practical part, concerning the discipline of the will, was prepared to be published with the following; but, as it was found that its publication would require the division of the work into two volumes, it was deemed more prudent at present to withhold it.

G. M.

July 11th, 1846

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INTRODUCTION.

THE human body is a living machine, constructed for the use of a spiritual being. It is adapted to the elements amid which it dwells, but, while in its own substance partaking of their nature, it is nevertheless so constituted as to be actuated by powers, the mode of whose existence and operation can not be explained by reference to the known laws of matter.

As far as history informs us, mankind have continued, from parent to child, through all generations, from the first pair, with an entail of suffering and disorder, in a manner which science can not explain. The perfection of omnipotent design, in the original formation of a human being, appears to have been disturbed, but how, or why, philosophy can not discover. Undoubtedly, the idea of God was not defective, and He can never be disappointed; therefore, while our doubting minds wonder how there can be a difference between the permission and the appointment of the Almighty, our reason, enlightened by Himself, rests assured that it shall hereafter be satisfied that evil itself is but the means of more completely demonstrating the omnipotence of Goodness.

Reference to our origin is not unnecessary in such an inquiry as the present. No investigation of God's works can be properly commenced, nor happily con-

ducted, without regarding the religious bearing of the subject. Science is but meretricious, if not the handmaid of religion. We are never free from obligation to our Maker; and without a distinct acknowledgment of the great First Cause, we can neither reason rightly concerning design, nor form any expectation concerning our individual destiny. The value of satisfying ourselves that the doctrines of the Bible, respecting our Maker, are really His own revelations of himself for our benefit, arises from the certainty that we can not receive them as true without confiding in the benevolence of his purpose and the providence of his power. From this revelation we learn that the human body, stupendous because of its adaptation to the more marvelous soul, was not a gradual invention, but at once produced perfect, with all its organs, constituting an individual harmonious in itself and with the universe. No after-thought was needed for its improvement. The hand that modeled the dust into the abode of a sentient being, touched it with perfection; and no better type of form or finish will be required by the spirit of man through the dispensations of earth, be they dark or be they glorious, than a body like that in which the first man bowed in worship, or walked erect in fellowship with his God.

Still we must revert to the fact that the inherited body is prone to disorder, and placed amid a multitude of causes which constantly tend to develop its predisposition to derangement, death, and decay. It therefore remains for us to discover, as best we may, the causes and the cure of all those manifold evils, to which we find both the spiritual and physical modes of our being are now exposed. By studying our nature, we shall the better understand our necessities, and be the better qualified to avoid our dangers or overcome our difficulties. We can not, however, in the least, apprehend the nature of our position, without, in some measure,

examining the relation in which we stand to other existences; nor can we fully discern on what our well-being depends, without an insight into our formation and some knowledge of the place which we occupy in the universe of God.

Every organ of the body is developed according to a specific plan, and for a specific purpose, yet, though perfect in itself as an apparatus adapted to a particular end, it holds relation to other organs and their functions. All the body, united by one life, subserves one soul. Each part harmonizes with the rest, and the purpose of the whole is to furnish a fit medium through which the intelligent spirit may become acquainted, by actual experience and reasonable inference, with the properties of things, and thus supply its innate faculties with appropriate impressions. Ideas are but the images of objects which the mental principle perceives through the bodily senses. The body must, therefore, be fabricated in keeping with the world which it inhabits. Hence we find it subject to the common laws of matter, and only prevented from being resolved into its elements by the life that resides within it.

The body is formed with peculiar reference to two principles—namely, motion and perception: motion administering to the desire of action; perception, to the desire of knowledge. The simple idea of a being placed by Almighty Wisdom, within a body, in order to employ it for intelligence and enjoyment, would appear to require that the organization and functions of that body should be so exactly adjusted to the being using them and so perfectly coördinate with the conditions of external nature, that no disorder might by possibility occur and no pain be experienced, but rather that every perception should be pleasure, and every action happiness. Probably there are such beings, and such abodes among the many mansions of the Father's boundless dwelling-

place; but such are either not human, or, if human, far away beyond the cloudy limits of earth.

Were the tendencies of our spiritual nature coincident with the holiness of the Divine Being, all external nature and providence would be coincident with us. Not a change would take place in the wide sphere of our existence, but in accordance with the disposition of our souls. We should love every intelligent being that approached us, and so perfectly correspond with our Maker as to worship him in all our knowledge, and find him alone the All-in-all of every sinless creature. But we are moral beings, derived from a corrupt stock, and born into this world without knowledge; it is therefore necessary for us to endure inconvenience, and, it may be, even agony, that our intellectual development may advance in connection and in sympathy with others, under the influence both of evil and of good, that thus we may become acquainted by experience with opposite and contrary affections, and individually know that holy thoughts dwell with joy and light, while perverse desire seeks to hide its misery and hideousness in the darkness which it loves. Hence, then, we discern why the body should be constituted as the medium of both painful and pleasurable impressions. Our souls require the stimulus of necessity, that the will itself may be free. Good and evil must be unalterably fixed before us, and felt by us, so to instruct us that we may choose between them; not, indeed, according to immediate sensation, but according to laws and principles founded on the will of Omniscience and Almightiness. The good pleasure of God, the benevolence of our Maker, revealed in our own understandings, is the only source of moral decision; therefore, the heroism of reason is submissiveness. Were it not that our souls are to learn dependence on spiritual power, and that our wills are to be subdued and subjected in joyous obedience to the

All-wise, our bodies might have vegetated like plants, rooted in the soil, nourished without care, and blooming in the sunshine or blighted in the storm, without the means of changing their place or improving their condition. But our volitions are excited by the states of the body. The Supreme appoints us a place in this dim world, that we may learn, that as the inconceivably diminutive atoms of which our bodies are composed are arranged by his hand for our convenience, so any one of them may, in obedience to his will, cause us to suffer and to die: therefore we are taught, alike by the minute and the magnificent, that He who brought us into existence for his own good pleasure, can alone sustain us and satisfy our spirits with the joys of life. In Him, therefore, let us trust without wavering; for he can not have conferred consciousness and reason upon us but for the purpose of enabling us to understand that his will is our happiness, and that in adoration we may approach him, thus to fill our being for eternity at the Source of power, life, love, and truth.

All the intellectual faculties depend on attention and memory, and these on the state of the organization. Our ability to compare, and therefore to judge, concerning objects of sense, must, of course, be influenced by the fitness of the senses and their connections, to enable the soul to attend to impressions. This fitness is not only due to the mechanism of the organs of external sense, but also to the condition of the blood and the nervous power. We shall, therefore, now proceed to point out certain facts concerning these peculiarities of vital action, from which the reader may draw practical conclusions for himself.

CHAPTER I.

THE BLOOD.

Our bodies are formed by the addition of materials received from without, which, being admitted into the blood, are distributed with it to every part of the system. In reflecting on this fact, the next thought presents itself in the form of a question. How are the blood, and the vessels through which it circulates, first produced? We can only reply, that the vitalized fluid, in which dwelt the organizing principle, in a suitable *nidus*, and under favorable circumstances, attracted materials to itself, and thus evolved the physical framework of the human being. It was derived from the parent's blood, but the primal source of each individual must have been from God in the direct creation of a parent stock. Hence, "each sire begets his character and kind," and no creature produces one of another species. The process by which blood is formed from other fluid under the influence of life, may be watched in the beautiful mystery of incubation.

If we would trace up the formation of the body to its first perceptible rudiments, we shall discover that there is something invisible and immaterial, that is not acting within the known laws of matter; something at work in the living fluid, tending to form a new body, and of course existing before that which it forms.

This something centers in a point, and, as the earliest evidence of its power, produces a microscopic vesicle, or cell, which, under the formative influence, goes on to

enlarge into a perfect egg, through every part of which the same principle exists at the same time, and causes the evolution of a specific order of organs, that ultimately harmonize and unite together, and administer to the consciousness and will of one sentient being. We see that the process of vital organization is not that of development, properly speaking, but of formation by an indwelling energy, which operates in every atom of the egg at once; at the same time and to the same end, the completion of a single body consisting of many reciprocal parts. At any moment it may die; a sudden or considerable change in its electrical state destroys the integrity it holds under the unbroken influence of life, and the power, which, under favorable conditions, would have matured it, now leaves the abortive materials to decay. The reader who is ignorant of this subject, should consult some modern work on physiology. But, by the closest study concerning it, what do we discover? Not an actual creation, it may be, but, as when the might of God "sat brooding on the vast abyss, and made it pregnant," a spirit of power is here amid the elements of another magnificent, and yet minute *cosmos*, subduing them to its own purpose, through them, in the order and consistency of a beautiful series of organisms, to reveal itself to other spirits, and to rest in blessedness amid the excellent world it had made its own.

The first visible germ of the human body is an opaque spot $\frac{1}{300}$ of an inch in diameter, within the germinal vesicle or egg, which is $\frac{1}{60}$ of an inch in diameter. This germ is the commencement of the whole body. Several corpuscles of the mother's blood are acted on at the same time, and caused to arrange themselves, or their elements, so as to form a new being. There is something in this germ which attracts to itself the materials of which all parts of the mature animal is formed. The germ, then, must contain the power which causes growth,

the force which ultimately constitutes the power of the whole body. The development of form is but the manifestation of an inherent power, which, under favorable circumstances, produced by the same might, works out the idea of God in the plan of each creature. Thus the human germ can not be developed into any thing but a human body. It is the microscopic concentration of forces, which, under suitable conditions provided by the creative Mind, becomes the full-grown being. In its first beginning, it is but as an atom of dust moved by the breath of God; in the end, the residence of a distinct spirit, capable of enjoying the attributes of the Infinite. These are facts, not opinions.

But we must not confound the blind law, by which atoms take their place to form organisms, a law which is probably chemical, with the operation of a power consciously at work. Yet chemical action is never accidental or fortuitous, it is always acting to an end; but we must distinguish the forces employed in developing a body for the accommodation of a soul, from the soul itself. In the body, many forces are at work together, under a common law, but the conscious being is not manifested in it till the end of that law is in some measure fulfilled; for the purpose is, to prepare a body for the use of a conscious being. But the soul resides in it without interfering with the creative and formative forces, and is not conscious of their existence until it finds that they have been ordered to their offices, and have built up an abode which it may enjoy, without knowing how it was formed, or by what means it continues subservient to its will and pleasure.

We see, then, that life is transmitted from the living blood of the parent to an ovum formed from it, and that, being thus endowed with a derived vitality, the ovum itself, under favorable conditions of warmth, moisture, and supply of oxygen, has the power of being gradually

converted into a new individualism, possessing a peculiar state and condition of those qualities by which it is distinguished from all other creatures. But yet the character of the new individual is so far modified by the personal character of the father and mother, as to partake, in a large measure, of their moral and physical peculiarity, with its consequences; not that the soul itself is propagated, but that a peculiar bias is imparted to physical formation, which favors the operations of the mind in peculiar manners. Yet as the soul is certainly a substantial being, probably there is no more reason to question the impartation of its qualities in generation, than those of the body. In both cases, existence is but successive subsistence, the continuation of a life of the same kind, according to fixed principles. If there be not this actual propagation of the substantial being, still we must suppose that the very images of objects seen, or even imagined, are fixed like a condensation of light in the living and thinking principle, and their impressions concentrated in the germ, as in a focus, whence they may be again expanded in the growing progeny.

The blood is alive. This was plainly expressed in the Bible more than three thousand years before science could be assured of the fact, but now there is not any truth in physiology more certain. The blood is also the vehicle of life to every atom of our organization. By properties peculiar to itself, all the various fluids of our bodies are produced from it, and every particle of every bone, muscle, membrane, nerve, and vessel, must have existed as an ingredient of the blood, and have been conveyed to its appropriate place by this circulating spring of energy and nourishment.

No vital action is maintained without blood, and should it cease to flow through the brain, all the senses would be instantly shut up, and every function speedily suspended. And then, the mechanism subservient to the

will being no longer obedient or fit for use, by a wise and benevolent provision of our Maker, all consciousness of the body would cease, and the soul commence its flight to other regions.

Persons who have heard of the circulation of the blood, but who have not duly reflected on its nature, are apt to suppose that it is maintained simply on hydraulic principles, the blood being driven out by the heart, as if from a force-pump, through one set of vessels, to be returned through another. As far as the mechanism is concerned, this is quite true, and the apparatus is perfect for the purpose, but something more is needed. It is found that a dead fluid like water will not pass through the dead vessels as the living blood passes through the living vessels.

Life prevents the coagulation of the blood, and perhaps suspends the attraction of cohesion between the arteries and their contents, and thus the circulation proceeds through the minute capillary or hair-like vessels with a force and precision which mechanism alone could never effect. There appears, indeed, to be a constant tendency in the blood to pass from the arteries into the veins irrespective of the action of the heart, so that this is to be regarded only as a beautiful auxiliary to the forces in operation for the purpose of supplying every part of the body with the vital fluid.

When we reflect on the known facts in connection with the constitution of the blood, we are astonished at its exquisite adaptation to the numerous purposes it subserves in the economy of life. I shall, however, only refer to a few points prominently important toward the end I have in view, which is, to present evidences, that if we would use this world without abusing it, we must inform ourselves concerning the influence of physical agencies on the operations of the mental faculties.

The blood, while alive, consists of a clear liquid, hold-

ing suspended in it a multitude of minute organized globules or cells, assuming different shapes under different circumstances. Some of these have a coloring matter adhering to them, which imparts the common color of the mass, although many of the cells are perfectly without color. The substance of the body appears to be formed of these cells, in the interior of which exist molecules, which seem to be endowed with an active and independent life.

The largest of these disc-like cells in the blood of man, is not more than $\frac{1}{3400}$ of an inch in diameter. They are shaped like silk-worms' eggs, but they differ in size and figure in different animals. Notwithstanding their minuteness, some parts of the body do not contain the red globules of the blood, the vessels of those parts not being large enough to receive them, as we see in the eye, which requires to be well nourished, and still, for the most part, to be perfectly transparent. Here, then, we observe that provision is made to arrest the red blood at a certain point, while the nutrient fluid permeates everywhere. If, by any means, the vital relation between the blood-vessel and its contents be altered, then succeeds a change in the quantity and quality of blood contained in it. Thus, we see congestion and inflammation of the eye causing the white to become red, and that which should be clear, obscure. Now, it is important to observe that whatever alters the condition of a part, also alters the sensation proper to that part.

Healthy blood is the medium of power, and its regular distribution, as before observed, is essential to the proper action of every organ of the body, therefore, every thing that interferes with the circulation, so far interferes with health, or, in other words, with the harmony and accordance of the instrumentality by which the mind is, in man, associated with matter.

Without entering into the very interesting peculiari-

ties of design, by which the vital current is produced and maintained, we may, with advantage to our main purpose, recur to the circumstance, that the blood circulates in two sets of vessels—namely, arteries and veins, the former conducting it from the heart, the latter returning it to that organ. We should, of course, conclude, that, on returning, it had already fulfilled its chief office, and accordingly we find that venous blood is incapable, of itself, of maintaining any function, so that whatever disturbs the equipoise between the venous and arterial currents, and thus hinders the blood from undergoing its proper changes, so far impedes the processes of life, and introduces causes tending to death, that is, to the suspension of the reciprocal influences by which life, chemical action, and mind, are held in due relation to each other.

Breath and life are almost synonymous terms, from the fact that the cessation of the one arrests the other also; we can not, therefore, separately consider the phenomena of respiration, as this function is indissolubly associated with the changes of the blood, and indeed with every vital process. The grand object, however, for which breathing is instituted, seems to be, that oxygen, and with it heat, light, and electricity, should be directly introduced to the circulating blood.

Oxygen is the supporter of combustion and of life, but it is so by entering into new combinations with the materials subservient to life and combustion, and therefore it is the cause of waste and destruction as well as of warmth and of vigor. It consumes the fuel by uniting with some part of it, causing the separation of other parts, and producing an evolution of heat and light, while entering into new forms. Its operation upon the body is not dissimilar; it excites vital action, and thus exhausts while it stimulates, and therefore it demands a successive supply of aliment in order that the

act of breathing may not itself destroy the body. Thus life is maintained by the coöperation of influences each in itself calculated and tending to produce death. We see then, at once, that He who commands contrarieties, alone could thus balance opposing causes to such just and exact effects. None but Omnipotence can preserve the equipoise of our existence. We hang on a breath, but it is His.

The contrivances for effecting the necessary interchange between the circulating fluid and the vital air, are among the most wondrous and beautiful of the endless evidences of divine wisdom and goodness. In some creatures, as insects, the air is circulated instead of the blood; but in man, the blood is caused to pass into a multitude of exceedingly delicate vessels, which are involved, but still with exquisite order, in sponge-like bodies, called the lungs. These are penetrated in all directions by fine tubes, terminating in minute cells, within which the air is admitted at every breath, so that the blood and the air are intimately mingled, and yet without being actually mixed, since a membrane of extreme thinness continues between them through every mesh of the complicated and delicate network of living vessels. In short, the lungs are made up of arteries, veins, absorbents, nerves, and a connected network, the fibers of which are finer than those of a spider's web, and more beautifully interwoven than the most perfect lace, together with air-tubes and air-cells, yet these are all kept apart, though each is essential to the others, and all are constantly exercising a reciprocal influence.

Half the heart belongs to the lungs, and is especially constructed in relation to the function of breathing. The heart, indeed, may be properly described as two hearts wrapped up together, and one of these is designed to send the blood—which has already traversed the body and parted with much of its vitality, but now returned,

loaded with chyle—into the lungs, there to be vitalized and rendered fit to furnish stimulus and nourishment to the whole body. It has been stated above that most of the blood-discs or cells have a portion of coloring matter attached to their exterior. This is said, by Liebig, to contain an imperfect oxide of iron when it passes into the lungs, and which becomes a perfect oxide while there. In this high state of oxidation the blood is returned to the heart, or rather the left cavity of it, which is thus stimulated to contract, and by a marvelous machinery of vessels, valves, and pulleys, which all who can should minutely study, it is distributed to supply the food of energy to all the framework. These few observations are sufficient to teach us that to breathe air deprived of oxygen, or containing it in such combination as will not allow its proper action on the blood, or to breathe air containing any thing which prevents the healthy changes of the blood, is to breathe death.

Every organ is endowed with a power of appropriating to itself whatever the blood may convey to it that is suitable to its organization and function. As, therefore, the different organized substances and fluids of the body must be supplied by the blood, it follows that if the blood be not duly furnished with the proper materials, through the digestive process, the blood itself must be diseased, and thus become the source of disease to all parts of the body, just in proportion as the blood may be deficient in the elements demanded by any part, or by the whole; for unless the chemical peculiarities of organism be perfect, both the vital and mechanical functions will also be defective, and the body, as a living machine, be rendered inefficient. These observations may be aptly illustrated by reference to those experiments which physiologists, with more zeal for science than for humanity, have instituted on the lower animals, to determine the effects of different kinds of food upon them.

Thus, dogs fed with food containing no nitrogen—such as sugar, oil, gum, starch, &c. have been found speedily to starve, notwithstanding a good appetite and digestion. Their muscles waste, their secretions are morbid, their brains soften, their eyeballs ulcerate, in short, being thus unnaturally treated, they become insane, and quickly die from the depraved quality of their blood. But this subject will be better understood, if we examine the analysis of some particular part of the body. We will take that important one, the brain, as given first by Vauquelin, and then by Sass and Pfaff. One hundred parts of it consist of—

According to Vauquelin.		*According to Sass and Pfaff.*	
Water	80	Carbon	53·48
Albumen	7	Hydrogen	16·89
White fatty matter	4·53	Nitrogen	6·70
Red fatty matter	0·70	Oxygen	18·49
Osmazome	1·12	Fixed salts	3·36
Phosphorus	1·5	Phosphorus	1·08
Acids, salts, and sulphur	5·15		

Here we find a number of elements peculiarly combined in the composition of a single structure. Now if the properties of brain, and its fitness to act as an instrument of the mind, depend on the presence and proportion of these ingredients, we perceive at once our immediate dependence on Providence for daily food, of the right kind, in order to the enjoyment of health and intellect, as far as our intercourse with this world is concerned. Of course, we can not for a moment imagine that the formation of thought is a chemical process; but yet, as we advance in our inquiry, we shall discover many evidences that the minutest alterations in our physical condition correspondingly influence our mental state—that is, the manifestation of the soul in connection with the organs of sense.

Modern chemistry has been very successfully applied to the explanation of health and disease; and this science

seems to have demonstrated that a large amount of our maladies, both of mind and body, is due to changes in the constitution of the blood. It follows from a knowledge of such facts, that by the determined application of means in keeping with the known necessities of the vital organization, the treatment of most diseases is now far more certain than it formerly was. This may be elucidated by any recent work which treats of diseases and their cure. Here we may remark, that as disease is founded in nature, both as it regards mind and body, it can only be met and overcome on natural principles. Therefore, he who called medicine a conjectural art, knew nothing of it, and committed a solecism, since if it be an art it can not be conjecture, for art is derived from a study of nature, and is successful only in as far as it conforms to her unalterable laws. Medical science, though imperfect, is certain and infallible, as far as it is true. Its limits are daily enlarging, and if men will patiently follow the teaching of divine wisdom, everywhere manifest in nature, the causes of health will be better and better understood, and disease become comparatively rare. Obedience to law, natural and moral, is the only means of preventing disorder, or of curing it.

On reviewing this slight chapter, it will readily be perceived that the health or enjoyment of every individual must depend on the quantity, quality, and regular distribution of his blood, because this fluid is the source both of the substance and the life of every organ of the body, and therefore the medium through which the soul is kept in proper relation to adjacent material existence. In exact proportion to the deviation from the standard in its ingredients, and in the force of the circulation, provided the arrangement of organs be perfect, will be the deterioration of health and intellectual capacity; for the blood is designed to preserve the machinery of life in such a state as may best conduce to the happiness of

the soul in its earthly associations. We are required, then, as far as we can, to avoid every influence which may disturb this pabulum of life; and it is of the highest importance to remember, that mental perturbations as effectually deteriorate that fluid, as do the more palpable agents which surround us when unduly brought to bear upon it.

CHAPTER II.

A VIEW OF THE NERVOUS SYSTEM, IN RELATION TO SENSATION AND WILL.

WITHOUT a knowledge of the physical constitution of man, metaphysical speculation would continue to surround our mental horizon with a mixture of clouds and glory, shifting and uncertain as a sunset sky, or like the flashing coruscations of the northern lights, suggesting ideas and resemblances according to the power of each observer's fancy. But neither would our deductions be without confusion, unless we reasoned from things of sense to things of faith; and, indeed, reason itself would appear without either origin or end, if we believed not in immaterial or spiritual existence. Therefore, while deprecating the dangers of metaphysics, we would acknowledge the value of such studies, since, while enlarging the scope of our conceptions, they require us to reflect on realities beyond the reach of our senses.

The doctrines of the Christian moralist, however, though obtaining their light directly from heaven, lose great part of their beauty and appropriateness, and, of course, of their power also, unless their reasonableness be demonstrated. This can scarcely be accomplished until we are made clearly to perceive that, in the nature of things, and in the very framework of our being, a sphere is provided for the direct operation of moral motives and influences, without which our existence would be vacant and unmeaning.

Here we may observe, that the idea of instruments of

sense and volition implies their employment by a being capable of perceiving, choosing, and acting. And unless we preposterously imagine that each instrument is the organ of a distinct intelligence, we must suppose that an individual being uses all these means of action and feeling, and makes the body one by unity of consciousness and of purpose. Although each side of the body contains an equally perfect apparatus, yet, while in health, no confusion results from double action, because both sides are controlled by one being—the soul, which receives impressions and exercises will, through either or through both, as occasion may demand. Without a two-fold machinery of muscles, and a two-fold apparatus of nerves, we could act only by spasmodic jerks, or by being set in motion by revolving, like the wheel insect. The gracefulness and convenience of alternate action, on which so much of our excellence depends, would be wanting, and we should be reduced to a lower condition than a zoophite; but reason demands both continuous and comparative action, and we therefore are accommodated with a body in keeping with the power which actuates it, and which demonstrates its own unity by rendering all the voluntary muscles subservient to its purposes, and by feeling pain or pleasure according to the state of any part of the organization. It is requisite here especially to enforce the fact, that the oneness of the conscious being is proved by the physiologist as well as by the metaphysician, for, otherwise, one who merely obtains a glimpse of the wondrous nervous system, without due reflection, might overlook the most important part of the whole subject.

The human body is constructed for mental purposes, that is, for the use of a being possessing mind. Singleness of person can not result from the brain and nerves, since these are divided into many parts, with many functions. It is as absurd to say, as some do, that there are

two thinking beings because there are two brains, as it would be to say there are two agents because there are two instruments. But if mind, or thought, can be proved to be secreted from the cerebrum, like bile from the liver, then, indeed, minds may be multiplied *ad libitum*, and every new consciousness is a new mind. Facts, however, demonstrate beyond controversy that the dual brain has relation to a dual arrangement of muscles and other organs of sensation and of action. Thus pressure on either side of the brain, or any disease in its structure sufficient to interrupt the current of nerve-power, causes paralysis of the limbs on the opposite side, and of course, in acting under such circumstances, the person so afflicted has a tendency to turn to the palsied side, which he counteracts by a mental decision. If, then, we find sufficient reason for a dual brain in the organized economy, and in the relation of human nature to the rest of creation, why, because we have two sides to our bodies, should we imagine the existence of two thinking beings wrapped up in one? All the oddities of mental manifestation can be accounted for without running our heads between the horns of such a dilemma; and as we can have no motive for so doing, but from a desire to reduce the soul to a physiological result, so we shall get no reward for the vanity of our labor but in the vexation of our spirit, and the merited ridicule of those who see the pregnant absurdity of representing a man as consisting of two *egos*, a double personality, a divided individual!

Man's nervous system consists of many parts, having distinct offices, but yet administering to one grand object —namely, the subjection of living matter to the purposes of consciousness and volition. As man is intended to occupy the commanding position among the sentient existences of this earth, and in some measure to sympathize with every living thing, his bodily endowments are in keeping with all nature, while his mental faculties

enable him to appreciate the condition of other creatures by what he experiences in his own person. Had he not been thus constituted, all his knowledge must have been intuitive, or directly imparted by his Maker. It he perceived not through sense, he must have perceiv ed through the Divine Mind, that is, without instrumen tality. He stands at the summit of the scale, and meas ures the degrees below him, and finds nothing above but the full immensity of which his own mind shadows forth the incomprehensible majesty and might. Thus he at once apprehends the creature and the Creator; and while sustaining himself with reliance on the power above all, he stoops down to examine the wondrous lines of wisdom and goodness inscribed on the minutest works of his Maker's hand. But the most astounding of all his studies is that which is most constantly pressed upon his notice. He sees and feels that all animated nature partakes with himself of those wondrous gifts, perception and will; and he finds that all vital formation is subservient to the same ends, the excitement and the fulfillment of desire. The variety of means adapted to these purposes is nearly infinite, but having discovered that the physiology of his own body presents him with a marvelous combination of all the specific differences which distinguish the sensorial organization of other creatures, he wisely directs his scrutiny in an especial manner to this, because it is more immediately concerned in his individual well-being.

The nervous system is divided into three parts; the cerebral, the spinal, and the ganglionic. With the brain are connected thought, will, feeling; with the spinal marrow, reflex or excited action; and with the ganglionic system, all that is essential to the *chemistry* of animal life. At the base of the brain arise the nerves of smelling, hearing, seeing, and certain others, which excite expression of the features, which naturally act in sympathy

with sensation or states of mind. Hence emotion is most fully indicated in the face. Beside the nerves of special sense there are forty pairs of nerves connected with the spinal chord, which answer peculiar and important purposes, since in their physiology is included all those muscular operations which conduce to the sustentation of the individual, such as breathing and swallowing, as also those which tend to perpetuate the species. Dr. M. Hall properly distinguishes between the spinal marrow and spinal chord; and he shows that the latter consists of the nerves of feeling or touch, proceeding by the spinal marrow to be distributed over the whole surface of the body. The spinal marrow, however, has nothing to do directly with feeling or volition, since its functions are those of ingestion and expulsion, which are excited involuntarily. Dr. Carpenter's view of the subject will, perhaps, assist us the better to understand it. He informs us that each spinal nerve consists of at least four sets of fibers. These he distributes as follows:—

"1. A *sensory* bundle passing upward to the brain.

"2. A *motor* set conveying the influence of volition and emotion downward from the brain.

"3. A set of *excitor* or *centripetal* fibers terminating in the true spinal chord of Ganglion and conveying impression to it.

"4. A *motor* or *centrifugal* set arising from the ganglionic and conveying the *motor* influence reflected from it to the muscles.

"Of these, the first and third are united in the posterior or different roots (*i .e.* those which carry sensation to the brain), the second and fourth in the anterior or efferent roots (*i. e.* those which convey motion from the brain)."

However clearly this statement may convey a notion of nervous anatomy to our minds, we can not but feel that the idea of conveying motion, sensation, and voli-

tion, or their influences, to or from the brain through the nerves, is thoroughly at variance with our consciousness. It does not appear that the facts which are proved with regard to the different nervous centers, require such figures of speech to explain them. Probably they may be better apprehended, if we regard the different sets of nerves as imbued each with a resident stimulus of a peculiar kind, which is put into action by impression upon them, whether by the mind in volition or by exterior objects. As long as the integrity of any *sensory* nerve allows it to subserve the mind, by intimating the presence of any object, we have proof that the mind is exercising its inherent faculty in relation to that nerve, and so also with respect to any *motor* nerve. If any thing be actually conveyed through the nerves, it is far more consonant with all analogy to suppose that some stimulus is conveyed, than to suppose that motion, sensation, and volition are conveyed, for as motion is not matter, so neither are sensations and volition. The brain and ganglionic substances, or that part of them that consists of cellular granules, may be regarded as the apparatus evolving the appropriate nerve-power, and we find that this power is indiscriminately requisite in every part capable of action under volition, emotion, sensation, or reflex influence. We shall therefore be more consistent and intelligible, if we ascribe consciousness and discrimination, voluntary muscular contraction, and every variety of feeling to the soul resident in the organism, and influenced and operating through this permeating nerve-power, rather than in describing will and sensation as something traversing the nervous fibrils from center to circumference, or the reverse. In connection with this subject, it is interesting to find so many indications of the universality of electrical action, or something similar, in the maintenance of organic function. From a series of experiments conducted by Messrs. Thilorier

and Lafontaine, they conclude that there exists in the nerves an imponderable fluid which may be considered as intermediate between the electric and magnetic. Like the latter, the interposition of glass does not prevent its transmission; and like the former, it may be felt at a distance through the medium of copper wire. But science must still further elucidate the modifications of this imponderable fluid, before we can venture to theorize concerning its influence on the nervous system and mental operation.

We shall find that the spinal system plays an extensive part in our experience, and its investigation will elucidate much that, under the old divisions and doctrines of the nervous system, was peculiarly obscure. In this we seem to discover where the dominion of the will begins and ends, since here we clearly trace the instrumentality by which the reflex physical functions of animal life are carried on, as distinguished from that by which the soul exerts its voluntary influence. That one set of nerves is appropriate to the use of the will, has been proved by a multitude of experiments on living animals, but also quite as well, or at least less horribly, by disease. Any nerve connected with the anterior of the spinal chord being divided, the will can no longer act through that nerve. Any nerve attached to the posterior of the chord being divided, the mind can no longer perceive through that nerve. Hence the latter kind of nerves are called nerves of sensation, and the former, nerves of volition. Recent observation, however, has proved that volition and emotion exercise a constant influence, more or less marked, according to circumstances, even over those vital operations which we usually consider quite involuntary, such as breathing. This fact had been acted on by physicians long before the physiological rationale was discovered. They have been accustomed to force those persons who have swallowed large

doses of opium, for instance, to walk about, and they have used violent means to excite the action of the will, because they well knew that unless the mind was roused to exertion, breathing would soon cease. But irrespective of volition, the muscles, subservient to the act of breathing, may be excited by impressions on the sentient nerves; thus, cold water, and other sudden or powerful excitants, occasionally applied, either in narcotic poisoning, or in mere faintness, rouse the latent nervous power, and keep the blood in motion until the cause of vital depression be removed.

Motion in an animal gives us the idea of the will being engaged to effect it, according to some demand made upon its feelings. Every act seems to imply an intention, and we have seen that will acts on the muscles through the medium of appropriate nerves. But the same set of muscles may be caused to contract, even in the dead body, therefore it is plain that sensation and volition are not essential to their action. There is something in the muscle and nerve, ready to act when excited by a suitable stimulus, and this stimulus is directed into the muscle by the mind, or else the mind acts directly on the stimulus proper to each part.

Consciousness and will are both connected with the brain, and their influence on the spinal system of nerves in the human body is effected by the substance of the brain-matter being prolonged into the spinal chord, and mixed with its center. Of course it follows from this fact that any disturbance in the connecting nervous organization, proportionally interferes with perception and volition. This may be strongly illustrated by experiments on the torpedo. If the brain of this creature be entirely removed, it does not attempt to protect itself, but if the smallest portion of brain be attached to the spinal chord it perceives the presence of any object near it, and becomes not only conscious of any injury, but is able

to discharge its electrical battery the instant it is touched. Yet however sound the brain may be, if the continuity between it and the nerves supplying its galvanic apparatus be broken, it can no longer excite it or give a shock. A very small portion of brain is sufficient for the purpose of consciousness and determination, and even the absence of the entire brain does not hinder the manifestation of will and appetite. It is, however, necessary that the peculiar development of nervous matter forming the summit of the spinal chord, called from its shape the *medulla oblongata*, should be preserved. The connection of this substance with several of the nerves is of course essential, because the consciousness of objects and the action by which consciousness is evinced, require that the mental or perceiving power should be put in relation to the instruments of sensation and will. Some physiologists, however, have taken away the brains of animals, slice after slice, destroying sense after sense, until they have removed the whole apparatus by which the muscles are actuated and the senses connected in subservience to the mind, and when they have completed this mangling of God's creatures, finding that these no longer endeavor to resent the outrage or complain of the philosophic cruelty, the anatomists have complacently persuaded themselves that bit by bit they have discovered the being that felt, and pared it away with the scalpel till none remained; as if mind could continue to manifest itself without means. We see from M. Flouren's experiments, that as long as a single sense remained intact with its nerve in connection with a center of action, so long perception and will were evinced, and surely, the existence of consciousness in any degree as plainly proves the presence of a conscious being as if all the instruments of speech and reason were in use, and the suffering subject of experiment or philosophic amusement could inform the groping dissector of all its feelings.

It appears that the perceiving and willing principle, when impressed, operates upon a certain form of nerve-matter, which is of a gray color, and arranged in vesicles or little hollow grains in contact with the nerves, which consist of a white substance, forming a vast multitude of exquisitely fine tubes. We shall perceive how slight a derangement in the nervous apparatus is sufficient to disturb its functions, when we consider that a nerve-tube has a place in almost every visible fiber of the body, and that it is not larger than a silk-worm's thread, and may be distinctly traced in an unbroken line from the foot, for instance, up through the spinal chord to the base of the brain. Each nerve-tube is distinct and isolated, never transferring its stimulus to another of any kind, and experiments indicate that a nerve being impressed on any part of its course, it is equally affected throughout. Thus a man who has lost his leg will imagine he feels a sensation in his toe whenever the nerve which was once connected with it is irritated. The nervous power which traverses the nerve-tube is alike arrested by pressure on any part of it. Some theorists, who proceed in their visions beyond the region of bodily eyesight, have propounded an explanation of nervous operation, which, as it originated in an endeavor to explain ghost-seeing in keeping with physiology, so, probably, it better comports with the imaginary than the real. They assert that a nerve-spirit pervades the body and acts as the direct medium of connection between the soul and the nerves. Kerner, and other German physicians, account for some of the marvels of mesmerism by this intermedium, which, say they, is the power by which ordinary volition, sensation, and perception are effected. Ecstatic patients are reported to have seen this nerve-spirit projected from an amputated limb, and occupying its place in all the plumpness of healthy proportion, so that as regards this luminous fluid there was no loss, — the

spirit-limb, so to say, was still present. Since the rational experiments of Baron Von Reichenbach are before the public, we dare not ridicule the ideas thus suggested. But still this inconceivable organic power, taking the shape of the body, not being demonstrable to any sight but that of a very sensitive person—a ghost-seer, we may be excused from further reference to the matter, as it belongs to a department to which we do not yet aspire. The nerves are formed for the purpose of maintaining currents of power, and they are, in fact, circles of tubes that have no termination, but bend to return upon themselves, either in loops, or by forming a beautiful and continuous network. Each of these inconceivably delicate tubes is in some part of it invested by the gray vesicular matter before mentioned, and the nervous energy of any creature is generally in exact ratio with the quantity of this gray granulated substance in contact with its nerves, because, as it appears, this matter separates something from the blood, which is communicated to the nerves, or in some inscrutable manner energizes them. Man has more of this gray substance than any other creature in proportion to the size of his nerves, and it seems that he is indebted to this larger development, and abundance of vascular brain, for his power of maintaining attention in such a manner as is consistent with his moral and mental superiority, for by the will this matter is excited to convey stimulus to the nerves of sense, and to the voluntary muscles, according to the demand which circumstances may require. All the nerves together form four systems, sensation, voluntary motion, reflex action, and that which unites the whole body in the processes of nutrition, growth, decomposition, and recomposition, and whatever is necessary to animal life, irrespective of volition and sensation.

Sir Charles Bell first pointed out the respiratory center of nervous power, but it is now disputed whether

this should not be included in the cranio-spinal, excito-motor, or reflex system. Its importance in the economy can not be overlooked, for on ceasing to breathe, we die. That the sympathetic, or ganglionic system bears some direct relation to each of the others, is indicated by the fact that it communicates with all the nerves. It is also probable that a minute network of sympathetic nerves accompanies every artery of the body; and it is known that all the viscera receive energy from the sympathetic alone; but yet these are all influenced, to a great degree, by the emotions of the mind.

For convenience' sake, the nerves are thus divided, and the study of comparative neurology fully warrants the division, because, in function, they are proved to be perfectly distinct. Yet the framework of the human body being constituted more especially in relation to the requirements of the soul, we find that every department of our nervous structure is associated more or less with mental phenomena, and so connected that no part can be much disturbed without interrupting the harmony of the whole, and interfering with our happiness. On carefully reviewing the distribution of the nervous system, it is impossible to avoid the conclusion that this marvelous apparatus is constructed as a medium of action to some invisible being; for it is certain *we* feel and act through it. That which feels and acts must be distinct from the body, unless the body itself feels and acts; but in as far as it possesses a distinct organization of nerves for distinct purposes, as feeling and motion, and sympathy, and all the body does not act together in feeling and willing, it is manifest that something beside the body must be engaged in feeling and willing, for that which wills is the same as that which feels; but the organization subservient to these ends is different, therefore the organization neither feels nor wills. And if that which feels and acts with various organs be the

same, then that must be an individual being, or otherwise it could not possess unity under different states, and be the same both in feeling and in acting. Moreover, as the bodily senses and organs constitute one body, and that one body in all its multitudinous parts is enjoyed by an indivisible being distinct from it, and which we call the soul, then the body must either have been formed for it, or it for the body. If it was formed for the body, then on the death of the body it is no longer needed, and both perish together; but if the body was formed for it, then, if a body be required to fulfill the purposes of its existence hereafter, another will be provided for it. But some say that the thinking, willing, acting being is a production of the body, and therefore with it ceases. Even this, however, does not logically follow. Still, casting this aside, they must conclude that the organized congeries of infinite fibers and cells, called the body, has produced an individual being out of its complicated self, a being without organs or elements, as the secretion of many organs and many elements. *Trow they this as their truth?* Then we must leave them to whatever consolation their faith may afford them. But if they only assert what they do not quite heartily believe, then let them get what good they can from their inverted assumption. Disputation, however, is an irksome and thankless employment, and scarcely answers the purpose of conviction: because the mind naturally sets up its own old defenses whenever its prejudices are attacked; but the quiet review of facts is according to the divine method of instructing us, and therefore we will advance in our endeavor better to unstand the intricacies of our being by further insights and observations concerning our compound nature. It is enough for us to conclude that consciousness is associated with the source from whence all the various currents of power permeating the body derive their supply,

since the mental emotions influence the regulation of life and nervation, and are themselves impressed and determined by conditions of the blood and nervous system. The action and reaction between mind and body are incessant, since there is not a moment, either in our waking or sleeping experience, when the nerves are not agitated by ideas, or ideas modified by the state of the nerves.

If we would study the organization of the brain in the manner of phrenologists, we find an impediment to our reception of their demarkation of faculty, from the circumstance that, so far from there being any distinct organs such as their system implies, all the convolutions of the brain are manifestly adjusted with especial regard to motion and sensation. The *motiferous fibers* are ramified along the whole of the convex and upper part of the surface of the brain; and the *sensiferous* fibers expand in contact with the gray matter over the whole of the convolutions of the brain. The extremities of the *motiferous* column are, in fact, covered by the expanded layers of the *sensiferous* column intermixed with the gray substance on the convolutions. We see, then, that the entire mass of brain is constructed with evident regard to action and sensation, or will and perception.

No especial organs appear to be required to give us a sense of pleasure or pain, but such as are essential to the impression of objects, or the sensation peculiar to any part. Thus fear is excited by any object with which the mind has been accustomed to associate the idea of danger; and the other passions and affections are excited in like manner, according to mental habit or association; for, in fact, all our passions, properly speaking, are acquired, our bodily appetites being of course instinctive. We never desire what is unpleasant, and never shun what we enjoy. When morally, that is, rationally, per-

suaded of the impropriety of any act because incompatible with our welfare, we lose our delight in it so long as we so think, however agreeable it might otherwise have been. I dwell on this subject merely for the purpose of enforcing the importance of proper education; understanding that term to signify the use of the senses on suitable objects, under moral restrictions, and for the purpose of acquiring the habit of acting with the conviction of true knowledge and in wise or religious association with well ordered agencies, since we see that moral evil is a reality, a disharmonizing power, which may actually be communicated from mind to mind, like a contagion that will subject the whole being to its laws when once brought, in any degree, to yield to its influence. We find that provision is made in the brain and spinal marrow for sensation and motion. We have a medium of impression, with means for supplying nervous energy to the muscles; but both orders of nerves belong to a being whose prerogative it is to think on the ideas excited by sensation, and in consequence also to will, and to act through the body. It is evident, from this constitution of mind and nerve, that a healthy state of either can only be maintained by being afforded appropriate excercise. If one set of nerves, say those most employed in perception, be engaged too long, as in monotonous labor, it must be to the detriment of the reflective powers; and though a man thus occupied may become acute, as a savage in his limited department, in the use of his senses, he is likely to possess only the disposition of a slave, unless some strong moral truth which toil can not obliterate has grown up in his heart from infancy. But those who have not enjoyed the advantage of early training into the facts of religious faith, must, under such circumstances, necessarily become mentally indolent and incapable of acting for their own futurity, except under brutal impulses, the stimulus of appetite or the persuasions of the whip. And this is the

state to which some men, without intending it, reduce their brethren by forcing them to exhaust their entire energies in producing wealth for their employers; for thus they must be deprived of mental and moral education, that is, of all that constitutes the durable riches of a human soul.

Phrenologists write as if they deemed an organ capable of desiring its own gratification. Desire is never felt without an excitation of organism, but then the individual being, that is conscious of impression, not the instrument, is the subject of desire and gratification. Will is not the action of an organ, but of the soul, and although the habitual indulgence of a passion promotes the development of that part of the nervous system called into action, it does not follow that a full development shall lead to its full exercise—far otherwise—mind has a restraining as well as an exciting power. Even according to phrenologists, the large destructiveness of Spurzheim, for instance, was controlled by moral habits or associations, and yet many a man with larger moral organs (to speak phrenologically) and less destructiveness, has been a murderer. What does this prove? Certainly not that a man's moral character is decided by the balance of his brains, but by the state of his soul as regards knowledge and affection. Ignorance and evil habits are not measured by the calipers:

> "Dark thoughts and deeds to darken'd minds belong;
> He can't live right whose faith is wrong."

There is but one willing power, however numerous may be the objects which excite it, and all that is necessary to call the will into action with regard to any object, is merely that it be furnished with organs of sense through which the soul may attend to it; the same organization being employed in attending to every variety of object, according as it may be visible, audible, tangible, so that an especial organization for every kind of sentiment and affection can scarcely be demanded,

since it is not organization which confers sentiment, but the soul itself that experiences it in the use of the senses, according to association and its innate properties. Thus with the very same order of organs, one man loves what another hates, not because the one is better formed for hating than the other, but because their mental habits are opposed in consequence of different associations. For the same reason, a man may avoid to-day that he eagerly sought yesterday, not because his organs are altered, but because some fact or fancy has modified his impressions—he has the same brain, but different knowledge.

The rational soul is never practicably divisible into three parts, animal, moral, and intellectual, for all our conscious, voluntary acts involve all these divisions. Man submits to impulse or resists it, according to the character of his knowledge and moral conviction. Unless mad, drunk, or idiotic, he always acts as a moral agent, being influenced by circumstances, just as they may comport with his necessities, and with his acquired ideas of right and wrong.

I am earnestly desirous that my observations on phrenology may not be misunderstood. No doubt its sober study is calculated greatly to advance the interests of man. All I wish to show in opposition to some of its professors, is, that though we think *with* brain in this world, the brain itself neither thinks, feels, nor wills. It is quite futile to refer to prearranged and coordinate relations between external objects and the organism of the brain, without supposing the existence of a power which is not derived from the brain, but which acts through it, not always and merely in proportion to the size of the organ and the state of its blood, but also according to convictions of truth, and by the operation of agencies beyond the reach of our senses, and whose influence, therefore, we can not esti-

mate. Let the anatomist, the phrenologist, and the divine proceed in peace together. This, all Christians will desire to do; but those who are not such will find contention rather likely to engender additional strife than to enlarge true knowledge. Why should we quarrel? We shall see more alike by-and-by; and that the more speedily the more patient we are with each other. The pursuit of truth can not properly divide her followers, but the more closely we adhere to her, the more nearly we shall approach each other; for all the departments of truth belong to the same system, and, had we faith in the Lord of life, nature, and mind, as all Christians profess to have, we should expect to find that the different radii of knowledge center together in one light. If any word of mine intercepts the smallest ray of that light from any understanding, may that word be blotted out forever.

CHAPTER III.

LIFE, IRRITABILITY, AND SENSIBILITY.

TRUE philosophy, like a beautiful island arising by slow degrees from the profundity of a vast ocean, continues to enlarge to our sight, and its ultimate extent is unimaginable, since its bounds can only be infinite and eternal—it is founded in the mind of the Almighty. When we attempt to penetrate the mystery of creation, by inquiring into the causes in operation by which the wondrous existences of this diversified world are evolved, we seem to look into darkness, and our endeavors to see excite in our imaginations a false light, which deceives and confounds us. There are deep recesses in the temple of nature, which the feeble flame kindled by man upon her altars serves rather to indicate than to illumine. The shekinah of its builder and Lord must return ere that temple shall be filled with appropriate light, and be revealed in all its magnificent beauty. At present, we behold but a little of the superficies here and there; and all we can discern only suggests the vastness of the design, the perfection of the finish, the wisdom of the details; and although we discover enough to fill our souls with awe and adoration at the manifest evidences of divine skill and benevolence, the impressions of the Almighty's hand are like hieroglyphics, the meaning of which we may not yet interpret. These thoughts are rather poetical than scientific; but poetry and science are more nearly connected than we generally suppose, since the confines of the latter are surrounded

with mystery, some conception of which the mind naturally endeavors to express, and therefore imagination, as becomes her office, beguiles us with fancies and fictions when reason fails to enjoy facts. Life, irritability, sensibility—these words may well suggest ideas of Lord Byron rather than of John Hunter. They are the names of qualities which we do not understand, and, like the term gravitation, as employed by Newton, express the complex notion connected with certain phenomena which we refer to occult causes, since we know not how otherwise to explain or even to express them.

The nomenclature of science is but a mode of masking ignorance; and we need not wonder at this, since all human knowledge terminates in abstractions, as if to intimate that this life is to furnish us with objects which we must wait for the next life more fully to discover. Nevertheless, facts are before us, and it is for us to treasure them, as they must form the commodity of our minds, the wealth of our reason; and the facts which force us to adopt the words life, irritability, and sensibility, to express what is common to them, are of great interest, beauty, and importance, and therefore our attention to a few of them will be abundantly rewarded.

The living body is endowed with power to reduce the elements congenial to its nature into its own substance. But the very existence of this animated structure required that some agency should have been at work anterior to those combinations and arrangements which we call organization. As far as we can discover, this pre-existing agency is life. This can not be a chemical property, nor the result of chemical affinities, since elementary action is opposed to it, but it is a power which modifies the laws of matter to form specific organisms. All living beings are the offspring of other living beings; and all we know of life is, that it subjects dead matter to new influences, and causes it to assume

new forms, to promote growth and to resist decay. We see that, as Coleridge says, "every rank of creatures, as it ascends in the scale of creation, leaves death behind and below it." The greatest tenacity of organic life does not, however, belong to the highest order of creatures, for we find that reptiles possess it in the greatest degree. It is said, that even some animalculæ enjoy a life which is destroyed with vastly more difficulty than that of more complicated beings. Thus the *vibrio tritici*, which causes the ear-cockle in wheat, may, it is said, be kept for many months in a dry and apparently dead state, and yet, on being moistened, it will revive.

We shall understand the term life the better if we reflect a little on the difference between a living and a dead body. First, we observe that living bodies need aliment, and convert it into their own substance, and next we see that they are subject to certain laws which regulate their action and rest. The reader should refer to works on physiology for explanation of the processes of assimilation and growth; but I will here illustrate what is meant by action and rest. The leaves and branches of a sensitive plant shrink from the touch, but on being too frequently approached this delicacy departs. Like an ill placed mind, it seems to lose its modesty amid rude associates. Poetical comparisons, however, contain only metaphoric truth. The habit of exposure blunts the fine feelings of the soul as well as the sensibility of the body, but the sensitive plant requires only rest to restore the contractile power which resides in the joints of its leaves and leaf-stems, in order to be as sensitive as ever. The same thing happens with regard to different parts of our bodies; for example, the heart, which acts under the stimulus of the blood, and then pauses, and then again contracts; and this is repeated more than a hundred thousand times a-day. If the heart be removed from the body, it will contract and

leap up when stimulated. If excited too rapidly, or too strongly, it soon loses this power; but if allowed due intervals of rest, it continues susceptible a considerable time. This power of acting under the influence of appropriate stimuli is called irritability. There is an irritability peculiar to each organ of our bodies, and the balance of the whole system, the harmony between its parts, depends on the proper action of each, because although each has a sort of individuality of office and function, yet all sympathize together under the influence of one prevailing power.

Of this irritability we are not conscious—it exists irrespectively of feeling, because sensation arises from the presence of something superadded to organism, and implies a mind. Thus we obtain, even in the roughest sketch of our physical being, the knowledge of many important facts. First, that organization is induced in matter by a living principle; next, that irritability is added to organization, and then that sensibility is added to irritability.

As the animated machinery is constructed to be the medium of conveying impressions to the mind, and also to serve as the instrument of its action; and as every part of the body possesses, not only an organization, but also a mode of sensation peculiar to itself, it is evident that whatever tends to alter the condition of any organ will affect our well-being accordingly. The perceiving and controlling agent, the soul, will be interfered with just in proportion as the part disordered may be more or less immediately subservient to sensation and will. Here we should remember that the organization which during health exercises its functions without our consciousness, during disease frequently becomes the seat of much suffering, for as there is a mode of feeling peculiar to each structure, so whatever disturbs the fine arrangement of nerves in it will cause the feeling of that

part to be changed. Thus, a tendon or ligament may be cut or burned without exciting sensation, but the purpose of such parts being to bind the frame firmly together, they are endowed with a property of feeling which gives us warning of danger whenever they are subjected to a force which may tear them. The cruelty of tyrants has been ingenious in the discovery of torments, and hence it used to be their fashion to break on the wheel, or by thumb-screws, iron boots, or racks of some kind, to agonize those who, in the manfulness of their trust in a higher power, defied the despotism of malevolence. But, blessed be God, he has made the soul capable of victory over all adversity. Torment itself induces a reflex action which substitutes enjoyment. That which suffers is superior to the nerve through which it suffers, and it can alter impression by the force of desire, and under motives which derive their power from a might above evil.

When the mind is excited, the effects are felt in the body according to the local tendency or state of any part at the time of the emotion. Thus, some feel the evil consequences of undue excitement in the liver, by bilious disorder, others in the heart, by palpitations, others in the head, others in the spinal chord, etc.

In short, many of the anomalies of sensation in morbid persons arise from mental causes, disturbing the nervation by which we become conscious of our bodies.

As in an intricate machine every part is formed on a plan embracing the whole, that all may work together for one end, so all the organs and functions of the body answer one grand purpose, namely, to bring matter into subservience to mind. And as a derangement in any portion of a machine impairs the working of the whole, so any disorder in any department of the body disturbs the operation of the power that is acting through it—the state of the mind is affected, and that not merely as

regards sensation in any particular part thus disordered, but because that part had something to perform of importance to the healthy action of other parts also. Thus mutual sympathy results from mutual dependence.

In the foregoing chapter it was shown that the brain, or organ through which we perceive objects and exert the will, is connected with all the nerves of sense and action, in short, with every organ of the frame. Hence we see, at once, that whatever disturbs the function of any part must more or less disturb the source of energy and of thought. Health of body, then, is essential to the fullest manifestation of mental power. The term health, indeed, implies a comfortable state of consciousness and a felt capacity of employing the body in the fulfillment of natural desires. We all experience the power of mental emotion over the physical economy, and, of course, whatever disorders sensibility must so far involve the brain and proportionally unfit it to act as an instrument of the soul. Every interference with the will is a subject of complaint, as if the thinking being acted from an intuitive conviction that the body was only designed for enjoyment. And it is true that a perfectly healthy person can not be otherwise than happy. But, alas! this health belongs not to this blighted world—Reason is gone astray, and we all suffer the penalty of that act, which, infringing the divine order, broke the moral harmony of the universe. But mercy still dwells on earth. Love has extracted the venom from the wound inflicted by the serpent, and the voice of Omnipotence is inwardly heard, suggesting remedies, and inspiring the soul with power and inducement to withdraw itself from misery by hopefully working on in the acquirement of knowledge, by intimacy with the works and the words of the Author of our being. Here begins the triumph over evil. Man's nature retains a quality by which it may be improved and elevated above mere animal appe-

tites. His intelligent spirit is associated with the body in a manner which inferior creatures never approach; for through an appropriate development of one part of the nervous system he is enabled, in a great measure, when rightly induced, to control and counteract the impulses which operate upon him through other parts, and by an effort of determination, under the persuasion of moral or religious motive, he can and does restrain the tendencies resulting from his bodily constitution, and so direct them as to render them subservient to the interests of sociality, to the advancement of his reason, and the increase of his joys. Even pain but augments the triumphs of his soul, for the Almighty, in making man, anticipated his struggles, and while he conferred on him the capacity of greater suffering, he also fortified him with a power of fixing his attention on higher objects, and thus, by ennobling his aims, enlarging his hopes, and filling him with the vastness of his destiny, God empowered man to rise above earth and time, so that even while in the turmoil of his troubles he might apprehend eternity and heaven. Jehovah having revealed himself as the friend of man, omnipotent in fulfilling and infinite in promise, we now behold, so to speak, an object worthy of our trust. We may safely commit all our being to Him, for we are His; He has made us for Himself, He loves us, and therefore we may indeed love Him with all our might, for He has given us all our faculties of confidence and affection that our faith and hope may rest entirely on Him. Thus, of course, we turn at once to the summit of existence when we would illustrate the distinctive characteristic of human intelligence as proving its superiority by the power of maintaining attention, because we feel that *nothing* will suffice—none but the Highest himself possesses attraction and might enough to raise man's spirit from degradation, or to satisfy its capacity for knowledge and happiness.

CHAPTER IV.

MENTAL CONTROL.

We are so constituted that every desire excites to action, and every action of the healthy body is itself a pleasure. The eagerness of the mind in a vigorous frame converts danger itself into enjoyment, and hence we see the fox-hunter, or, better still, the Nimrod of the Indian jungle, boisterous in his mirth, because both mind and body are intently engaged. If, however, the peril be imminent, the pleasure is gone, and under the lion's paw the bravado is weaker than a child. This great change arises, not only because the mind is impressed in a new manner, but because the mind reacts upon another system of nerves. The muscular exertion, the general excitement, the bounding heart, the full supply of oxygenized blood, kept the brain in most energetic action during the pursuit; but now the prostrate hunter feels that fear can effect a change that suddenly counteracts all these: his florid cheek is blanched, the high-toned muscles unstrung, the strong heart merely flutters and then stops—he is faint with fright. The extremes of bodily and mental excitement are here brought together; we see their effects, but we do not discern by what means the difference is effected. A little reflection on the nature of the nervous system, and its connection with the sanguineous circulation and muscular power, will enable us, in some measure, to understand the change.

The invalid, precluded by his feebleness from the free

use of his body, becomes tremulously conscious of himself so long as his attention is not attracted to other objects. His sensibility, both moral and physical, seems intensified, all his senses become more acute, he feels "tremblingly alive" in every fiber. The rough blacksmith when subdued by disease, is as delicate as a pianist; the slightest inharmonious sound annoys him; the quiet light disturbs his brain; the happy sprightliness of his own loved child brings tears into his eyes; the breath of zephyr shakes him; and the perfumed and balmy breezes of May, as he sits under the hawthorn in the sunshine, seem to crush him, or seize him with a creeping horror, and the blithe chirp of the grasshopper fills him with a panic. He is out of keeping both with heaven and earth, yet he is neither a coward nor a tyrant. The fact is simply this: his body is weakened, and his mind is not fortified by dwelling on proper objects. He is mentally irritable, partly because his debility prevents his maintaining attention through his senses as he would wish, and partly from the low habit of his thinking. His heart is feeble, and yet his brain is intensely excited, for his soul will not suffer it to rest. Here, then, we have presented to us, in a palpable manner, the nature of the contrast between morbid and healthy sensibility: the former is consciousness with deficiency of muscular power and blood, the latter is the feeling of bodily faculty in keeping with rational desire, and fit for exercise. In other words, morbid sensibility is brain in action under the soul without a corresponding energy, and activity of the body under the control of the will; but healthy sensibility is the feeling of health, the consciousness of power in the body to accomplish desire, to use the senses, and to perceive without pain. Susceptibility of nerve and feebleness of muscle generally go together, and are commonly associated with irritability of temper, from the constant interference with habitual

exertion and tendency of will. The weak man is always in danger of troubling others, and of tormenting himself. "To be weak is to be miserable," is, however, only a Satanic sentiment, for religious accquiescence in the wisdom of divine disposal secures the help of Omnipotence. He who knows no health but that of the body, however cheerful and joyous he may be while that lasts, is a wretch the instant it fails him. But he whose desires are consistent with moral excellence, and who breathes the higher atmosphere to which Christianity alone can elevate us, is always conscious of a health that can not be totally destroyed by bodily disorder.

Now, lest facts themselves should lead us to false conclusions, let us inquire what is meant by sensibility. Do the organs perceive their own state? Are they conscious? No; sensibility depends on attention; it is the condition of that which perceives in relation to the nervous state of the part attended to. Matter itself, we know, is not susceptible of sensation. It is the soul that feels through every sense, whether special or general, and, when deprived of perception or employment in one direction, it becomes the more intent upon the use of those channels of intelligence that are open to it; thus even the soul of an idiot, whose nervous system is so disordered or defective that he can scarcely compare the impressions of his different senses, so as to infer, makes some poor amends for defect in variety by repetition of the same impressions, and contents himself with few objects, seeming to set his affection upon a small range of sensations, as if the ideas derived from them were capable of endless multiplication. His faculties are out of tune, and the chords vibrate at random with scarce an accidental harmony. The soul, when not engaged in active exertion or pursuit, is apt to become more conscious of the body, and during the unfitness for exercise which bodily feebleness produces, there is leisure to at-

tend to every impression made upon the senses. This state readily becomes confirmed into a habit, and hence those subject to the misery of chronic debility, when not sustained by higher thoughts, are ever ready to fill the friendly ear with a catalogue of their complaints. The man of maladies is a man of many words, unless, under the constant sense of infirmity, he has been rendered so completely hypochondriacal as to lose the hope of sympathy, and to hide himself from all sociality in the gloomy solitude of his own fancies, forever haunted by the demon of disease. This, however, is just the character that Jesus would have gone out of his way to tranquilize and bless; if, indeed, to do good could ever have been beside his purpose; and if Christians more nearly imitated him whom they profess to follow, there would be far less of moody melancholy among us than unhappily exists.

The mercy of God is practical, and His benevolence toward each individual is demonstrated by the power He has conferred on each to act. Every one who is not deprived of the opportunity of using his muscles, has, to a great extent, the means of enjoyment under his own command, for, with a proper motive, that is, with faith in God, action is happiness. We have four hundred and fifty voluntary muscles on purpose that we may employ them, and *if we do not*, the nervous power that should have energized them will be the cause of torment, by producing morbid sensibility; thus the idle, so far from being truly *indolent*, meet an appropriate punishment in their own habits.

The effect may be accounted for by considering the influence of attention; a great pain prevents our perceiving a lesser; even the terrible disease—*tetanus*, is arrested by substituting a more excruciating infliction. According to this principle of substitutional action, sensibility and muscular energy counterpoise each other

When the mind is intently set on using the muscles, it scarcely perceives any thing but what it wishes. Infuriated madmen, in their violence, will inflict deadly injuries on themselves without feeling; and the soldier, in the warmth of the fray, when comes "the tug of war," is unconscious of his wounds: and the brutal pugilist in the ring bears bruising like an ass, but afterward, in the leisure of the sick-bed, his muscles tremble and his voice becomes querulous, and, as Shakspeare makes Cassius say of the fevered Cæsar,—

> "When the fit was on him, I did mark
> How he did shake. I did hear him groan:
> Alas! he cried, give me some drink, Titinius,
> As a sick girl."

Peculiar condition of nerve also contributes to excessive sensibility; thus it happens, in some forms of palsy, that the feeling which is altogether deficient in one part, is exquisite in another. It is not unfrequently found that the affection of the brain which induces paralysis of nerves of volition increases the power of those of sensation: thus I have seen a person groaning from the pressure of the bed-clothes, and to whom a breath of cool air was agony, who nevertheless had no power to move his muscles.

It appears as if *sensibility* were due to the presence of some subtile fluid which traverses the nerves, and that an interruption to its transmission in one direction or through one set of nerves caused its accumulation in another, so that when the mind acts upon those nerves unduly supplied, the effect exceeds what it would do in perfect health. Still it would be absurd to adopt the language of certain physiologists, and speak of sensibility itself as being accumulated in one part rather than another. Sensibility implies sensation, and both must be the result of something which is put in motion by the mind acting on the nerve; or else it must arise from

the mind itself being impressed by a change in the state of the nerve. The impression of an injury is not perceived until the mind voluntarily acts upon the part affected, or until the attention is withdrawn from whatever may at the time happen to engross it. This circumstance affords a positive proof that sensation and sensibility are mental states or mental cognitions of bodily impression.

But *sensation* is modified both by the condition of the body and by the state of the mind with regard to it. Thus we find that, in the peculiar condition of mind and body attending mesmeric sleep (according to the testimony of honest witnesses, whom I the more readily believe from what I have seen), persons may have their limbs removed without pain, and the exposed extremities of the divided nerves being roughly handled, causes only a sense of titillation, under which the patient laughs like a tickled child. Pain, indeed, is but the excess of an impression which, in a milder form, is pleasure; and the same degree of impression is either one or the other, according to the state of attention at the time, or according to the association of the mind. In many respects, pain is really an acquired feeling, like fear, and it arises from the mind being taught to associate certain sensations with the idea of danger. Thus when the Esquimaux first had razors given to them, they used to gash their tongues for the pleasure of the new sensation of being cut with so keen an instrument; but after they learned there was danger in such wounds, they never cut themselves without an expression of pain.

The cause of irritability remains among the many undiscovered secrets of our nature, but from what we know concerning the conditions of its development, it appears probable that it depends upon the presence of that, whatever it be, which, together with a peculiar state of nerve and mind, produces sensibility. The contraction

and tone of muscles are attributable to that property of their fibers by which, under certain stimulants, they alter their relative position. Dr. Marshall Hall and others have proved that the irritability of the muscles is influenced by nervous connection, and is more especially due to the action of the spinal chord. It is here peculiarly worthy of remark, that volition, acting through the brain, tends to exhaust the irritability of the voluntary muscles, and invariably induces a sense of debility when continued without due intervals of rest to allow the restoration of their power under the nervation of the spinal system. Thus it appears that the thinking and willing faculties operate through a nervous apparatus in some measure antagonist to that which supplies irritability, or the power of contracting the muscles. If a muscle be paralyzed by injury in a nerve of volition, which, of course, is naturally called into action by the mind acting on the brain, we find that in such a case the muscle it supplied is more irritable and more disposed to contract when excited by reflex action, as in tickling or pinching. This is the consequence of its continued connection with the spinal chord; for if this connection be broken, its power of contracting is in a short time destroyed.

The emotional and reflex actions are intimately associated; the latter, indeed, are the very same kinds of motions which serve to give automatic expression to our feelings; yet the propriety of observing the distinction between them will at once appear, when we remark that reflex actions are not necessarily connected with consciousness; but emotion is feeling in its intensest form—namely, that which belongs to our passions. If we cut off a snake's head, and then wound the middle of the body, the neck turns toward the wounded part, as it would have done with the head on. This is a reflex action, probably electric, induced by impression on the nerves, which cause sensation and at the same time

excite the nerves that contribute to instinctive motion. It is evident, in this case, that will and feeling have nothing to do with the action. Remove the head of a frog, and the frog will lie apparently dead, but yet, if you pinch its toe, its leg will be drawn up. Now, how do we know that it does not feel? Cut the creature in two, either transversely or longitudinally. In the former case, either its lower or upper extremities will move on being irritated, and, in the latter case, the limbs on either side will move. But then again, it may be asked, how do we know that each section is not endowed with separate consciousness? Reason might well conclude that it could not be; but, in man's experience, we have conclusive demonstration on the point. A person palsied in consequence of injury to the spinal chord is without feeling in his legs, and yet they move when irritated. This action is neither felt nor in any measure controlled in such a case; but were the nervous system sound, and the mind suitably directed, the will would restrain the action; for though reflex actions are involuntary, yet they are often prevented by volition, as when one with a ticklish foot submits to have it handled, and resists the tendency in the muscles to snatch it away. There are, then, two symptoms of motives in man, the instinctive and the rational; and these are in correspondence with two systems of nerves. Man is endowed with a brain such as he has for the purpose of exercising greater attention in comparing objects, and also for the purpose of controlling instinctive impression according to reason. The sensual impulse of instinct is so great that the impression in one sense is not corrected by that on other senses, as in man. Comparison, on which judgment depends, is deficient even in the highest class of animals: thus Blumenbach's ape, having got hold of a large work on insects, turned over the leaves with a very studious air, but he pinched out all the painted beetles and ate

them, mistaking the pictures for real insects. His taste and touch did not serve to detect the deception of his eye while under the excitement of appetite produced by the image of the thing which he naturally relished.

However our reason and experience may incline us to think of specific organizations, our reflections on instinct would lead us to a very consolatory conclusion, because it indicates the incessant and boundless benevolence of God. All creatures purely instinctive, such as insects, appear to me to be incapable of positive pain, but abundantly endowed with the capacity of pleasure. Their every action results from direct impression, so as always to be accompanied by a feeling of enjoyment, or a sense of doing what is desired, the desire, the action, and the exciting cause of the action, being connected without interval, and without comparison. Thus an insect, although cut in two, will seize its food with avidity.

We say, then, that mere instinctive creatures, in working out the designs of God, who works in them, have apparently no design or intention of their own, for mere instinct can not choose nor be disappointed, and yet its every movement is a pleasure, a gratified impulse. Thus bees collect honey and wax, working in darkness with superhuman skill and harmony together, and producing the means of enjoyment, and of the perpetuation of their kind, without real forethought, but simply because such and such actions of their organization are agreeable. Thus the Almighty directly fills lower creatures with their happiness, while they remain entirely unconscious of their end. They can not be educated for futurity. Man, however, reflects on sensation, conceives sentiments, expects consequences, meditates on coming events, and governs feeling. Those animals which most nearly approach him never suppress the utterance of their feelings as he does, and this utterance at once diverts from suffering. Even the severest hu-

man agony is alleviated by its free and full expression, for this involves action, and demands the exercise of the will, and thus directs the mind into new channels. The wounded heart finds its relief in lamentation, but the spirit that will not complain, or bears an unutterable grief, must corrode the nerves, and quickly bring the body to the grave. Man, in spite of his instincts, reasons and hopes as an intellectual, and therefore as a moral creature. He has hence a stronger will than any other being on earth, and is, of course, subject to greater and more frequent disappointments, because he is liable to impediments to his purposes, both from the wills of others, and from his own constitution; and he can not be as happy as he is intended to be, unless consciously working in obedience to what he knows of the will of God. This is all that is meant by holiness. Man's happiness, however, is rather in his hopes than merely in his actions; action without hope is his misery, and, therefore, the higher his hopes, or the higher his faith in their fulfillment in keeping with the revealed mind of his Maker, the greater is his blessedness. Because man is capable of believing, he is capable of an infinite education by acquaintance with endless facts; and, therefore, he is fit for an eternal existence, because he can reason on the works of God, and enjoy the manifestations of His wisdom and love forever.

There is many a fine spirit so mistaken as to gather clouds about its path which obscure the light of heaven, and whose conscientiousness causes the feelings of the body, opposing and distracting the better desires of the mind, to seem like the witness in themselves of a perpetual condemnation. Surely it will relieve such souls, clothed as they are with humility, to know that there are impressions made on the nervous organization which are unavoidably followed by excitements which, to a great degree, necessarily involve the mind, and which are pos-

itively sinful, or merely healthy stimulus to moral vigor, just in proportion as a man may voluntarily indulge them, or resist them, as experience, or the better teaching of revealed religion, may instruct him. Such are the natural appetites, all of which require control, and some of which, under certain circumstances, must be absolutely suppressed if we would enjoy the proper dignity of manhood. Whether we know it or not, the excitants of passion are always acting on us as long as they are present. The cardinal vices are conquered only by shunning them, but they can not be shunned except by our seeking the society of the cardinal virtues. Yet righteousness involves obedience to physical as well as to moral law. This is true religion, which no man can obey unless impelled by motives derived from Heaven. That man is righteous overmuch who attempts, or pretends to, a righteousness in opposition to the laws of his nature, for it is not more in the nature of a reasonable being to act from religious motives, than it is for him to obey the demands of his appetites just to that extent, and no more, which may benefit his own moral existence, and promote the well-being of others. However much the instinctive law in the members may war against the law of the mind, means are provided to secure the moral triumph. The sane man need not succumb to the brute. He is endowed, when rightly informed and acquainted with pure objects of affection, with a power of self-governance which no inferior creature possesses. In his own person he seems to include all lower natures; and as to man was given the dominion over all animated things, so he proves his fitness for authority by governing the animal nature within his own body. The very fact that where he is duly instructed and encouraged, as by the doctrines and examples of Christianity, he really rises into the highest position of intelligence, that of a being sympathizing with God, proves that the human

mind was made to be governed by principles distinct from those which operate in lower beings. In short, morality and religion were brought from heaven, and are the visible evidences among us that God has set His heart upon the restoration of man to the bliss of holiness, and of Himself.

The power of the prepared mind to resist impressions on the body is exhibited plainly in the effects of sudden surprise. The soul, when thus impressed through either of the senses, summons in an instant all the energies of the body—every muscle is roused, every fiber intense. If any part be diseased, the shock is apt to produce permanent and perhaps fatal injury there. But it is beautiful to see how the state of mind prevents all disturbance by preparing the body for any expected call to action. The most courageous man is a coward when taken by surprise, and the Indian, that stands firm as a martyr at the stake, will start like an antelope at a sudden sound. A case will further illustrate this interesting subject. A man is nearly poisoned with strychnino or nux vomica, and from its peculiar effects in exalting the function of part of the spinal chord, there exists an excessive tendency to impulsive and reflex action. A universal spasm or convulsion is excited by the slightest unexpected touch on any part of the body, but such is the power of the mind over the nerves and muscles, that, the patient being forewarned, the touch produces no such effect. The sensibility to external impressions is so great when persons are under the influence of strychnine, that the slightest touch of the finger near the ribs will cause uncontrollable fits of laughter. The reflex action suggests to the mind the feeling connected with that peculiar play of the muscles experienced in laughing, and the will at once gives way to the feeling. This explains hysteric laughter arising from spinal irritation.

The power of mental determination in bearing and

resisting impressions on the body, whether originating in pure emotion of mind, or in the nerves connected with the organs which manifest emotion, seems to demand the use of the muscles as the means of diminishing the intensity of feeling, and of exhausting the sensibility. We have already seen, that powerful muscular contractibility and exalted impressibility are to a great degree opposed to each other. But excess in the one often terminates in excess of the other, and a sort of vibration continues in the nervous system until the balance is restored by a general exhaustion. This frequently happens in diseases which more especially involve the feelings of the mind, as well as the nerves belonging to instinctive impulse. Hysteria is such a disease; but its terrible paroxysms are not unfrequently overcome by great bravery of effort, in using the voluntary muscles, and in directing the nervous energy, as well as the thoughts, into new channels. Even the convulsive spasm of hooping-cough is greatly checked, when occurring in the adult, by the resolute mind fixing the body with every muscle on the stretch, until perspiration starts from every pore. The manner in which the mind prepares to meet the shock of agony is well seen in the tenseness of muscle with which the brave sailor or soldier bears the debasing blows of the cat-o'nine-tails; but still finer heroism is often witnessed in those enfeebled sufferers who hopefully endure the severest operations without a groan.

Impulses of instinctive character may often become so uncontrollably powerful as to hurry a man to deeds of madness, when disease of the brain, or even an unreasonable habit of employing it by giving license to appetite, diminishes the mind's proper control over the nerves. In delirium, and other derangement, this is often seen. In some cases, the patient acts as if in a dream, without any mental association with things around him, but in

other instances he is aware of the irrational nature of the feelings by which he is impelled, and he warns those about him against the violence to which he is tempted, and which he feels he can not resist. It is not uncommon for patients to solicit restraint, on perceiving a tendency to the recurrence of such a mania, rather than expose those they love to the risk of being injured. The control of the rational mind over impulsive disposition is wonderful. A breath of air, a ray of light, a motion, a sound, or a sight, even the thought of any bright object, excites the fiercest convulsions in hydrophobia; and yet, in confident obedience to what was believed to be the Savior's will, a sufferer from this terrific disease has taken the cup of blessing in his hand, and firmly and steadily drank from the silver chalice, peaceful for a while, as he who sat clothed and in his right mind at the feet of Him who cast out the demon that no man could tame.

Here, then, we find the grand moral of our enigmatic nature. We are constituted for suffering, but also for triumph over suffering. The human will is to be determined by moral and religious motives, and its highest point of strength is quiet submission in the faith of what we know concerning the good-will of our Maker toward us. The body of man is formed on the principle of affording due exercise to reason in resisting impulse, and reason, when rightly informed, always rightly determines, and, under the encouragement of social affections, will also act correctly. Even the Spartan youth, trained in that heroism of pride which deemed vice virtue, until detected, allowed the stolen fox to tear away his entrails rather than evince a sign of agony. Why, then, should we, who possess the highest motives in the friendship of the highest Being, in all that intellect and religion can confer, why should we complain of our inheritance of fleshly ill? He who truly loves truth has no vain desire. We feel assured it is our duty and our dignity to yield ourselves

wholly to the will that ordains the perfecting of our spiritual existence through the trials of the natural. The tribulation that confers vigor and perpetuity on our heavenly affections is undoubtedly a badge of godly honor. The mental might called into action by Christian principles is not only the cause of individual, but also of national superiority; and the nations that know nothing of this fountain of energy are melting away, and will vanish from the earth, if they be not brought under the dominion of those in whom the highest religious thoughts have given the highest stimulus to intelligence and industry. Man is capable of greater suffering than any other creature on earth, but he is also capable of higher and intenser enjoyments, and that simply because he is a man and not merely an animal. He lives at large, the denizen of eternity; and he is able to "believe all things, hope all things, and endure all things," with the consciousness that God owns him, not only as his creature, but as his offspring. Therefore, let us not say, with the mistaken bard, in whom passion and impulse so strongly warred against knowledge—

> Dearly bought the hidden treasure
> Finer feelings can bestow,
> Chords that vibrate sweetest pleasure
> Thrill the deepest notes of woe! BURNS.

Rather let us rejoice that the soul of man is trained by trials. He must suffer, to be great; he must conquer himself and the world, in order to be forever mighty. For this end the reasonable spirit of man is instructed by truth, the mind of God revealed within him, that he may rise in faith above instincts, passions, and opinions, and come forth an eternal hero, who, through submission in weakness, arms himself with omnipotence.

> He who would force the soul, tilts with a straw
> Against a champion cased in adamant.
>
> WORDSWORTH.

CHAPTER V.

INDIVIDUALITY AND IDENTITY.

The idea of an individualism is probably derived from the use of the body, as it is a consciousness of oneness in successive actions, a feeling that the different organs and diversified sensations belong to one being, who, in employing instruments and regarding objects, connects a sense of the past with the present, and thus renders all experience a proof of its own *ipseity*. We speak of the identity of the body simply because we are conscious of acting in a body, but it matters not to us whether it consist of identically the same particles or not, since our feeling of personality depends not on that knowledge; for if we felt the atoms of the physical body constantly changing, as they really appear to do, *we* still should feel ourselves to be the same, since *we* remember, conceive, imagine, act, will, and not our bodies. A being that has once felt never loses its identity, however much it may confound sensations; or fail to interpret them; the very fact of consciousness is a demonstration to itself of the sameness of that which is conscious.

Though existence itself is the great mystery, there is nothing in the profound depths of Nature's secrets more stupendous in its consequences, or more awfully sublime in the vastness of its interests, than the fact that each one of us possesses an inherent faculty of self-hood, by which all ideas, all thoughts, all volitions, and all feelings that can arise in the history of our individual being are made at once, and forever, our own. The power or

principle within us by which we recognize our distinct standing as creatures, each one with peculiar relations to the rest of creation, and different from that of all others, is the result of the mind that is infinite working through infinite means to one end, the demonstration of Omnipotence, or boundless unity through endless variety. Every atom is a proof of the divine presence, and every mind a response to God, for He constitutes the identity both of atoms and of minds, each in itself an unalterable unity, to be located and manifested in evidence of His own will, which alone is power. Molecules and minds have each their affinities because they have unchangeable natures. They may stand in new relations, but are themselves still the same in reality, for what they are, or are capable of, is the consequence of an eternal decision, the changeless mandate of the Almighty; and as each atom is a necessary particle in the universe of the Universal Intelligence, so each soul is a requisite portion of the perfect revelation of the Omniscient made in and to the creature. Therefore, whether we regard individuality in all we can learn of the highest created spirit, passing with light from world to world, or simply try to peep at it as exhibited in the structure and functions, vital and sentient, of the plant-like zoophyte on the rock, still we are equally incapable of comprehending the marvel revealed to our contemplation. We are overwhelmed with wonder; and life, feeling, consciousness, oneness of being, equally constrain us to exclaim, *O Altitudo!* Some writers on this subject have endeavored to make it appear that a man loses his identity when he passes from one state of consciousness to another. It may as well be asserted that our identity is lost in consequence of any change in the objects of attention. This is really all that happens in our alternations of consciousness, since these are but variations in the operation of that which remembers. This is fully

known to all those who are intimate with such disease as arrests outward perception, for the moment of its accession is generally marked by the patient's reverting to some incident or object not connected with what is present. Sir Humphry Davy's experiments on himself with nitrous oxide, or laughing gas, afford an apt illustration. He says: "After the first six or seven inspirations, I gradually began to lose the perception of external things, and a vivid and intense recollection of some former experiments passed through my mind, so that I called out, 'What an annoying concatenation of ideas.'" On another occasion, his experiments were carried further; and we find actual insanity developed from the mind acting on a brain excessively stimulated. "I felt," he observes, "a kind of tangible extension highly pleasurable. My visible impressions were dazzling, and apparently magnified. By degrees, as the pleasurable sensation increased, I lost all connection with external things; trains of vivid images passed rapidly through my mind, and were connected with words in such a manner as to produce perceptions perfectly novel. I existed in a world of newly connected and newly modified ideas." When Southey breathed this gas, he called it "the atmosphere of the third heaven." In both these instances we witness an exaltation of natural character under the influence of a stimulus; the mind was enabled to act more vigorously with an excited state of brain. It usually happens that persons fully brought under the influence of this stimulant are unable to remember what were their feelings during its action. Probably the intention of observing what may be felt would, as in Sir Humphry Davy's case, always qualify the experimenter, in some measure, to remember his sensations, just as we find that a somnambulist, being urgently entreated to recollect what he is dreaming about, will sometimes be able to relate it when he awakes.

We are told that madmen frequently lose their identity. Some honest and excellent physiologists, being, perchance, unwilling to puzzle themselves with transcendentalisms, leisurely and deliberately proceed to the opposite extreme. It does not, indeed, appear how there can be such a thing as personal identity or individualism belonging to man, or at all conceivable, when it is assumed as the basis of the science of insanity, that the individual thinking soul has no existence. My own observation of madness has not been extensive, but it has been careful enough to enable me positively to speak to the fact, that insane persons do not lose the sense of identity simply because they call themselves by new names, and fancy themselves possessed of new endowments. They may talk of being others, and even confound the memory of what they have heard of others with their own experience; yet it is manifest they act their assumed characters, however incongruous, in keeping with their own habits of thought and feeling. If it could be proved that a man could really act and feel at one time with the actual experience of one person, and at another time with that of another person, then, of course, any particular man, in his vigilant life, and in all stages of his existence, is not the same identical being or person, but merely a succession of consciousnesses, and we must resign our fond fancy about our individual souls. Responsibility is thus at an end, the hopes of deathless capacity and immortal glory are extinct. But is such a *finale* the end of science? Can science present no better vision to the gifted seer? Has philosophy no prophets? Are we but dust, conscious dust, without soul, without the past, without futurity? Nay, *we are;* and therefore shall be! Our faith rests not on the correctness of dark man's attempts to interpret faculties and functions, but upon the great plan of being and the Word of God. The Bible, the universe, and

the soul, are made for each other by the same Mind. So long as men feel that singleness of mind is distinct from brain, and believe in their own personality, which is not an attribute of the brain, what right have physiologists to assume that mind exists not apart from nerves? Or why should they presume to deny, so gratuitously, that as the same being directs attention to different organs for different purposes, so that which thus wills, feels, thinks, and acts, is an individual distinct in essence from the body it employs? But those philosophers who fancy they have proved that a madman loses his identity because he loses his place, also think they see a little more deeply into the bottomless abode of truth than the commonalty, and contrive to quench the light of the Everlasting within them by extinguishing their souls, believing that which thinks and feels to be a secretion from the blood within the brain. They look no further than the grave for the end of their existence, and find their final rest in rottenness. And because of their self-satisfying convictions in this respect, they can regard monstrosities with beautiful composure, or take occasion from them to ask those who believe that all things are possible with God, Where is your soul? The answer is in reserve: "God is his own interpreter." We are almost sure to interpret very partially, even with our best advantages, while filled with a sense of incongruity, in consequence of the narrowness and obliquity of our vision. We look among the starry worlds of light, where order reigns, and think we see confusion! We pry into the arcana of physiology, and fancy we discover accidents resulting from divine laws! But there is a spiritual world beyond our ken, and probably a knowledge of *its* laws is essential to our understanding the causes and occasions of disturbance in material organization and development. Yet this abstruse and most interesting subject may perhaps be

elucidated, if we endeavor honestly to contemplate the very facts which at first sight so much startle us. Monstrosities are certainly permitted for wise ends, and it may be on purpose to awaken our inquiry and enable us to comprehend what might otherwise be altogether hidden from us. We will only allude here to the circumstance that we can not imagine monstrosity to have happened but from the interference of some power, with a will adverse to the plan of almighty benevolence. Disorder is not the direct effect of Jehovah's fiat, but a perversion by the act of something contrary to law; and, however difficult it may be to conceive an opposition to Omnipotence, yet we know it exists; and that, doubtless, the better ultimately to demonstrate the oneness of wisdom and of might. In our souls we may look for the proof. Where is the soul? says the anatomist; I can not find it. The viscera do not contain it, neither does the brain. We would ask, are electricity, magnetism, caloric, light, and life, seen there? No. And yet all these actually reside in the animated machinery, as all thinkers are aware; and these are ministers of mind, servants of the soul, the substantiality of whose existence must be as real as any thing it acts on. However much we may in our ignorance perplex ourselves with *lusus naturæ* and attempts to understand the individuality of insects and zoophytes, we need not question our own individuality, since the consciousness we enjoy so well assures us of our identical nature, as to warrant the expectation that each one of us will find a place appropriate to his personal existence forever.

The man is the same being as the infant; the beginning is necessary to the end; and the individual totality is not more plainly evinced in the oneness of the body used by one will, than in the oneness of the history during one life.

We will glance at a case or two which induced some

hasty physiologists to sneer at the doctrine of a soul. Sometimes two imperfect bodies are joined together, as in the Hungarian Sisters, who were united back to back, and whose main blood-vessels, the *aortæ* and *venæ cavæ inferiores*, were joined together. They had distinct consciousness and mental peculiarities, but their sympathies with each other were beautiful and intense. Here were two souls united by affection, as their bodies were by blood-vessels.

What physiologists expect in such cases does not always happen. Thus, in that form of monsters in which the upper axis is double, and the lower part single, as with Ritta and Christina, it was expected that each head would possess voluntary influence over the entire lower half of the body, but, instead of that, it was found that each head governed its corresponding lower extremity, and only when the middle line of the body was touched was it felt by both individuals.

Now as we know nothing of the soul but by consciousness, it is certainly somewhat unphilosophical for the physiologist pertly to ask, Where is the soul of a monster that exhibits no such consciousness? God will answer that question, because He excites us to inquiry on purpose to answer us. Let us wait; we shall understand more of souls ere long. In the mean time, we will observe facts as they are the lessons which the All-wise has set before us. There is an instructive one published in the medical journals for 1821. It is an authentic case of a lad who had a headless body growing out of his stomach. Whatever part of this supplemental body was touched, the touch was felt by the lad as if a corresponding part of his perfect body had been touched. Here, then, we have one soul in connection with two bodies. But is it not folly to ask, Where was the soul of the brainless body, seeing that a soul, if such a being exists, must have its place appointed by its Ma-

ker, and can not by us be known to exist, unless in a corporeal frame fitted to manifest it?

From these wonderful facts it would appear, that when two bodies of similar nature, or with nerve-power of the same kind, are closely approximated, they act upon each other, and the mind resident in the one, being suitably directed by will and attention, perceives through the other. They are in nervous *rapport* with each other, and so fully sympathize, as to be, in fact, one body or system. Hence we may literally receive the language of the apostle: *Aut an nescitis quod agglutinatus meretrici unum corpus sit? (Erunt enim inquit duo ad carnem unam.)* Of course they are subject to the same laws, in consequence of obedience to the same impulse.

Many of the marvels of mesmerism admit of a similar interpretation, and he must be a wild kind of philosopher who would deny the possibility of known facts, rather than endeavor to explain them. Mesmerism is not a whit more puzzling than many common things in natural history. What can be more stupendous than the manner in which distinct individuals act in sympathy together, as most perfectly one, and yet apart? A multitude of unities in the same body, having the same feeling and the same desire, and yet susceptible of separate existence as a multitude of individuals, is seen in that wonderful compound being, the *Virgularia Patagonica*, a polypus, described by Darwin, in his Journal of a Naturalist. He says: "Each polypus, though closely united to its brethren, has a distinct mouth, body, and tentacule. Of these polypi, in a large specimen, there must be several thousands; yet we see that they act by one movement; they have also one central circulation, and the ova are produced in an organ distinct from the separate individuals. Well may we be allowed to ask, What is an individual?" To which we

reply, that individuality does not necessarily belong to one organism only, but as a sense of being is essential to it, and this, as far as we know, can only be acquired objectively, at least in this world, therefore God provides a suitable body for every soul. It is a self-hood which brings organs peculiarly and appropriately organized under its own power, and into its own sphere, as *media* of sensation and of action. Here we discern how wisdom, beauty, benevolence, and love, are evinced in the plan of creation—the happiness of individuals depends on sympathy with others, and the feeling of self becomes the basis of social union.

Among human beings there exists such a power of sympathetic consent that a multitude may be apparently possessed by the same spirit; the organism of each instantaneously taking on the same action simply from the general attention being directed to the same objects. If we would learn the full extent of sympathy, we must study the records of the Dancing Mania, or see the Barkers, the Shakers, the Jumpers, the Dervises, and other *Convulsionaires*, at their devotions. There are many facts which tend to convince us that a large company may be put into such relation to each other, under similar circumstances, as that the very same idea shall present itself to all at the same moment.

If, then, a number of perfectly distinct bodies and minds are capable of being so completely actuated together, we may cease to wonder that a thousand polypi, bound in one by a fleshy union, should move as if impelled by one mind, and experience pains and pleasures in common; consort and consent destroy not our idea of individualism, but rather confirm it. Probably, however, Darwin's observation led him to too hasty a conclusion; and what Muller states concerning the Polypifera may, in every instance, be true—"the irritation of a single polype causes the contraction of that one only,

and not of all the polypi of the stem. The stem itself has no individuality, it has no will, and is incapable of conceiving any objects of desire. In it, however, resides the power of producing new individuals by the power of germination."

CHAPTER VI.

MATERIALISM AND DEVELOPMENT.

The order of the universe is maintained by law. Every atom obeys the fiat of Omnipotence, and therefore takes its place in relation to other atoms. Each element possesses a nature and affinity, binding it to the connection which the Creator requires it to hold for specific purposes, such as the formation of certain definite compounds subject to aggregation. But the same power which determines the composition of every part and every mass of matter, also determines its size and proportion in regard to other parts and masses.

We recognize in dead matter four forces: a force which causes particles to adhere together, which is called the attraction of cohesion; a force which causes mutual action among the elements of which any substance may be composed—chemical affinity; a force which causes weight—gravitation; and a force which tends to separate particle from particle, element from element, and to counteract gravitation itself—repulsion. All these forces are subservient to organization, under the qualifying influence of the vital principle, which exercises a power that, to a certain extent, modifies all material operations; while another power, still more inscrutable—namely, mind, controls the living organization, to the formation of which all the other forces contributed. We, of course, now confine ourselves to the consideration of organism, as existing in our own bodies, which are manifestly constructed to subserve the purposes of that which feels, acts, and thinks within them.

Having the help of something more than mere induction from the evidences of our senses, concerning the nature of the power to which belong the faculties of consciousness and reason, truth requires us to adopt her own dogmatism, and to assert the existence of the soul, not as a mere inference from what we know, or fancy we know, concerning the powers of nature, but because we believe that our Maker has informed us of the fact, not only by intuitive conviction, but also in express words. Yet our investigations of bare matter, and all we can learn of the laws which govern it, instruct us also to look beyond chemistry and mechanism for the origin, not merely of mind, but even of life. Neither of these principles can result from mixtures of matter. Mind can be compared only to the creative power of which life and material combinations are consequences, not causes. Mind is but the action of our own souls, the manifestation of a spirit in the body, by which we become conscious of changes in our condition. Every being thus susceptible of experience is a distinct individual. Now the body is formed for the use of this being, that it may be put in relation to the surrounding world, and be capable, according to circumstances, of feeling the forces which have been just mentioned. In order, however, to our better apprehension of their influences, it is requisite briefly to examine the doctrine of development, and to investigate the nature of those bodily endowments through which the soul is made acquainted with the agencies of this rich world. Physiologists are in the habit of describing mind as one of the products of organization. As well may we say, the light which manifests what it falls on, is a product of that which is manifested. Does not physiology itself teach us, that a formative principle existed antecedently to development, and that this principle is at all periods of life independent of special organs, and is manifested in

plants without even a nervous system? And in insects, if not in higher tribes, we see that it successively alters the entire system of nerves, as well as of the other organs, so that the metamorphoses follow each other so strangely that there is not the least similarity in the form or in the habits of the same creature between its first and last stages. Moreover, this formative principle is propagated; and, more marvelous still, it is propagated with a tendency to produce the moral as well as physical resemblance of two parents in an individual person. Now the physical peculiarities and condition of this person are due to the formative principle which existed before the development of his body, in as far as that which caused development must have preceded that which it caused. If, then, the principle which, operating on matter, forms the body of a man, be not the mere product or result of development, surely that which forms mental conceptions, and compares past with present ideas, so as to reason concerning them, or to draw conclusions by which future conduct is determined, and by which the thoughts are directed onward into eternity, can not be such a product.

This believing, reasoning principle, which recognizes the Almighty and adores him, is surely less likely to be a result of development than that blind, unconscious power which modifies matter according to laws which Omnipotence has imposed on life and atoms. It is mind that consummates as well as commences creation; and the intelligence, which in each of us learns through material impressions, must belong to a distinct individual, generated only by the direct will and purpose of the Creator, not out of matter, nor from nothing, but by the operation of his own power to specific ends; for each individual is an idea of God, and therefore it can not be really confounded with another being, much less with organs and secretions.

A person can not be a material product. In making this assertion, we do not go back to the fables and follies of Plato for eternal archetypes and uncreated ideas, but we take our Maker's word concerning our origin, and exult in the felt fact that our souls are His, and that He himself inspires us with understanding and power, and gives each of us a body and perception as it pleases Him. We exist individually by the direct and constant operation of the Almighty.

Matter, however, is as truly an evidence of omnipotent power as mind itself, for, in fact, the existence of the material elements proves the existence of their Maker. What is organic force or vital energy, what the affinity of atoms, what the force that rounds a dewdrop, and regulates a universe? Do we arrive any nearer to the solution of the grand problem of phenomena by asserting, with Reil, that there are original differences in the composition and form of all organic bodies? Where and what is the agency by which they acquired their original tendency to assume such forms? And why does every atom of every element exist with unalterable properties, which allow it to combine with other atoms only in peculiar manners, in definite proportions, and with specific results? We can only answer, that the might and mind of the Designer determine the nature of every being, and therefore, matter is no less a demonstration of his power than is our own consciousness.

I contend not with materialists to depreciate the sublime and beautiful worlds revolving in light and immensity around us, nor to diminish the admiration of the marvelous and intricate combinations of divine workmanship existing in our bodies. Whether we look abroad with the astronomer among the innumerable hosts of heaven, or search with the anatomist into the structure of our frames, we equally endeavor to gaze upon the Infinite, for the microscope and the telescope

alike inform us of an eye that sees beyond their reach, and of a touch that adjusts atoms, the weight of which none of our analyzers of light can estimate. We see no reason why matter should not be perpetuated. The power that made it can alone annihilate it; but because we believe the Creator works not at hazard, but with eternity always present, we can not suppose annihilation possible. Therefore, we can not imagine the association of mind with matter to be any impediment to immortality; but my difficulty is to believe, with the materialist, that matter itself thinks, or with him to conclude, that the continuance of matter in a peculiar form is essential to the perpetuity of consciousness. We can rather believe that mind imparts its immortality to matter, than that matter may confer it on mind. There is, however, no other objection to the material hypothesis of mental existence than that it is insufficient to account for facts, and does not agree with what we experience of mind, nor does it allow us to receive the dictum of that strongly authenticated book, the Bible, concerning the existence of spirits.

What has reason to do with matter, or its affinities, in forming an idea of any of the divine attributes? When once we have acquired, through sensible objects undoubtedly, a notion of duration and of power, we can, as before observed, if we determine to think, conceive a faint idea of Omnipotence. Now the mind that attends to this idea is not material, for even if we supposed there could be no attention and no idea without the body, we must yet imagine a power or principle capable of influencing the body voluntarily, so as to attend and to conceive thoughts through it. Matter *may* be the medium through which the Almighty intends always to express his will, as he does here, but still it is only a *medium* fitted to our senses as at present constituted. He teaches us the diffusiveness of His love in the light, and legibly

writes His name on every one of His creatures, but the mind that interprets the handwriting and intuitively perceives the meaning of Jehovah's language, must be akin to that which designed and created all that we behold and desire to understand.

He is full of cant who will not acknowledge what he believes; and that man is honest who says what he means, and endeavors to give a reason for it, however much he may be mistaken; and it behooves those who discuss such subjects to prove at least some degree of fitness for the purpose, if only in the control of their tempers, since to despise another's intellect, to suspect his integrity, or to ridicule his convictions, is but poor evidence either of philosophical enlightenment or of Christian feeling.

Every living creature evinces certain tendencies to development, and, from its earliest formation to its maturity, it grows according to a plan, which is not complete until the characteristic degree and kind of mind belonging to its race is manifested through an appropriate organization. We have already stated this developing power in the formation of the human framework to be at first discoverable in so small a quantity of matter, that the anatomist can scarcely examine it, even with the best microscope. It commences in the invisible world. Something consisting of parts, and yet so minute as to elude research, gradually becomes a visible germinal vesicle, in which is concentrated all that, under favorable circumstances, becomes the body of a full-grown man. The identical being which, after thirty years' residence and accommodation on earth, expatiates after the manner of a god, is, perhaps, contained in that vesicle; if so, an insect's egg is a wide world compared with the first abode of humanity. In that point of matter dwells a condensed light, which incorporates what it needs for its own manifestation. This, it may be, is not merely a

metaphor. The most remarkable fact connected with the first visible ovum is the intense brilliancy of the fluid within the germinal vesicle. Would not this circumstance justify our inference, that the central germ possesses a strong affinity for light, and that it is formed of a pure and simple element. Newton was not fanciful in judging of the composition of the diamond by its relation to light; nor are we, if we demand special attention to similar relations existing in the germinal vesicle.

It has been, perhaps somewhat presumptuously, asserted, that the human being is developed through progressive stages, in each of which the type of some lower grade has been preserved. This is a mistake. The human embryo presents no real analogy to that of any inferior creature. In order to prove the above assertion, it would be necessary to show more than general resemblance, for, unless the preceding stage furnish an exact similarity of arrangement, in all its parts, to a lower type, a superior development can not properly be said to spring from an inferior species; and the argument for development, as propounded by those who contend that man is an expanded monkey, must entirely fail. As each creature, in its origin, is designed to a distinct place, so its total organization is specifically prepared. Therefore, any interference or arrest of development, at any stage, does not cause it to stop short as a perfect, though inferior creature, but monstrosity is produced; a manifest disturbance of creative design by forces out of place, which could not happen if disorder from some *will* were not permitted to oppose the Creator's, for the purpose of proving Omnipotence as the Healer.

Each new being is a new creation. The truth of this we shall acknowledge, if we rightly consider the subject; for even a new arrangement of matter could not be effected without the exercise of creative power in a new direction. This is beautifully evinced in the

production of one being from the ovum engendered in another. The ovum is a cell in which other cells are developed in a specific manner in each class and species of animals. Dr. M. Barry, who presents an extraordinary example of patient intelligence laboring from love of truth, and whose accuracy may be depended on, informs us that the process of development in mammalia commences by the disappearance of the germinal vesicle, and by the formation of two cells in its stead, each of which gives origin to two others, and so on, until the germ consists of cells too numerous to count. Each cell is filled with the rudiments of new cells, which are arranged around a pellucid point. The process of development in each cell is similar to that of the germinal vesicle, or parent cell, from which all spring. These are the earliest visible beginnings of the germ preceding the formation of the embryo, which is produced out of the germ by a peculiar arrangement of cells, each one of which goes to form an organ. The ovum may pass at least twenty-one stages of specific development, and contain, beside the embryo, four membranes, one of which has two laminæ, before it has attained the diameter of half-a-line.

It appears that even the shape of the cells of the yolk differs in different tribes of animals. These cells also change the chemical character of their contents during development, and the process and periods of this change differ in different grades. The substance of each embryo is composed of cells having a determinate character. Every vessel, every nerve, has at first a separate existence and development, and every organ, which ultimately becomes single, is at first double. But the parts of a complicated animal, such as man, are more numerous from their first appearance. The subdivisions are originally greater, and the development does not take place by additional parts merely, but by their

enlargement and coalescence; therefore the higher classes of beings can not be mere developments of lower classes. The superior tribes present, in their early stages, certain appendages which have been injudiciously compared to those belonging to inferior grades; for instance, something like gills appear in the embryos of mammalia, when arrived at about the sixth of their uterine incubation, yet these parts are not gills, nor, properly speaking, analogous to gills as such, as those of mollusca, or those of osseous fishes. They could not be developed into gills, nor could they answer any similar purpose, simply because they are merely the cleft arches which all embryos have near their necks in consequence of the general plan of structure by which the vessels and nerves of the opposite sides are joined together. This brief argument may be suitably summed up in the words of Muller: "Not long since it was supposed, and seriously affirmed by many naturalists, that the human embryo passed through the different stages of development, which are permanent conditions of other animals. This was a very bold hypothesis, and one that is by no means correct. Its falsity was well demonstrated by Von Baer. The human embryo, in fact, at no period resembles a radiate animal, or an insect, a molluscous creature, or worm. It is not true even that man resembles at one time a fish, at another time the amphibia or reptiles, and at another time a bird; he merely bears the same resemblance to a fish which he does to a bird or reptile, namely, the resemblance which all vertebrate animals bear to each other." The argument in favor of original identity of germ, from a general resemblance at any period of development, amounts, then, to nothing, since the embryo of man never so far resembles any inferior animal that a skillful anatomist would not discover a wide difference between them.

Many a puny philosopher, with just shrewdness

enough to puzzle himself and unsettle faith while examining facts, has asked, "Where is the soul of the fœtus?" He who sees our substance while yet imperfect informs us, that a body is *prepared* for the being, man; and therefore we are not wise to say, Where is the soul? For until the body is ready and adapted to manifest its presence, how can it be evinced? We see it at work as soon as the infant begins to use its senses; and, surely, to look for a demonstration of the soul's existence where the means and instruments are not fit to reveal it to us, would be as vain as the fool's search for golden eggs. We can not see the soul through a microscope, but we discover it with our naked eye, when, using living organization, we observe it animating with thought and feeling the features of those around us.

But, however we may speculate concerning the commencement and progress of organization, we may fairly conclude, that all the functions of mind are the results of a spiritual power working according to its own nature in that which is corporeal, and subduing matter into specific order for specific ends.

We acknowledge the operation of undeviating general laws, but at the same time perceive that the combined action of various forces can not create a new conscious being, however necessary they may be toward the construction of a proper abode for it. There is something accommodated, something which seems to be present in an inscrutable manner amid the vital, chemical, and mechanical forces, at work from the first organized cell in which the body of man is designed to its maturest development. But with this profound subject is connected a secret which peculiarly belongs to the Omniscient. The holy of holies is before us, where the Highest reveals his glory. We can not lift the veil. Let us bow in reverent awe, and wait for fuller knowledge. Such

facts relating to creation and procreation, however, as are important to our conduct, are sufficiently manifest to our understandings, although we still find ourselves unable fully to explain them: such is the hereditary transmission of peculiar tendencies, both moral and physical. Here matter and mind unite in a point which science acknowledges to be beyond the reach of her microscopic vision. That impressions received by the mind of the parent are, in their influence, transmitted to the offspring is undeniable, since experiments on animals have demonstrated the fact in the clearest manner. Thus Mr. Knight, who investigated the subject for a series of years, tells us, "that a terrier, whose parents have been in the habit of fighting with polecats, will instantly show every mark of anger when he first perceives merely the scent of that animal. A young spaniel brought up with this terrier showed no such emotion, but it pursued a woodcock the first time it ever saw one. A young pointer, which had never seen a partridge, stood trembling with anxiety, its eyes fixed, its muscles rigid, when conducted into the midst of a covey of those birds." Yet each of these dogs is but a variety of the same species, and to none of that species are these habits given by nature. The offspring of the shepherd's dog in active service instinctively follows the flock, while, if his father or grandfather have been taken away from this occupation, he will have lost the art, and be difficult to teach. A pup of the St. Bernard's breed, born in London, when winter came and the snow was on the ground, took to tracing footsteps, after the fashion of his ancestors.

It is important to observe that training counteracts propensity even in a dog, and although the education of a human being does not destroy bodily temperament, yet, so long as the faculties are clear, it may always be subdued by superior motives. It is only the brutal part

of man's nature that seems to be derived. Truth, knowledge, religion, are not propensities, but they are the correctors of all error. With their aid alone can we restrain and guide impulse to right ends; but, of course, the mind that is not amenable to moral law, must be altogether subject to brute instincts, and ought to be treated accordingly—by physical restraints, and the removal of excitants.

Our education, also, may be said to begin with our forefathers. The child of the morally instructed is most capable of instruction; and intellectual excellence is generally the result of ages of mental cultivation; but degeneracy is most marked at both extremities of society: the highest and lowest classes are those worst educated, both morally and physically speaking. It appears from the examination of juvenile delinquents at Parkhurst by Mr. Kay Shuttleworth, that the majority were found deficient in physical organization, and this no doubt was traceable to the parent stock. S. T. Coleridge said that the history of a man for the nine months preceding his birth would probably be far more interesting, and contain events of greater moment than all that follow it. Southey fancied Coleridge was not in earnest in uttering this startling sentence, but perhaps the words convey too profound a truth for the doctor's former vision. Their meaning will shine out if we reflect on the influence which the mother's and even the father's habits exert on the constitution molded *in utero*. There the groundwork of all history is laid in embryo, and the seeds of evil there begin to take root, and to vegetate in a genial soil, long before they open their leaves to the sky. The soil, indeed, alters not the nature of the seed, but vast is its effect on development, and no one can doubt that the state of the parent determines, in a large measure, the predisposition of the offspring, for predisposition in fact signifies only bodily aptitude.

It has been said that excessive mental cultivation on the part of parents has caused a vast increase of inflammation and dropsy of the brain in children. The late Dr. Davis, of London, stated that eight out of forty-five deaths in the Universal Dispensary were produced by dropsy of the brain; and Dr. Allison states, that forty out of a hundred and twenty patients die of this disease in the New Town Dispensary, Edinburgh. Nearly a thousand per annum die of this disease in the metropolis alone. Dr. Comdet says, that twenty thousand deaths occur annually in France from the same malady. Other diseases of the brain are proportionably destructive, especially in children; and those who escape death in childhood continue throughout life morbidly disposed. Dr. Burrow, physician of Bedlam, observes, that six sevenths of all the cases admitted to that institution are hereditary; but yet these, it appears, are not more difficult of cure than other forms of insanity. Now these records have been derived principally from public charitable institutions. It will be granted that the patients of such charities are not the most likely to suffer from mental cultivation. The facts, at least such as have come within my own knowledge, rather tend to demonstrate that spirit-drinking, debauchery, excess of all sorts in the parents, and occasionally the debility of privation and the abuse of mercurial medicine, have been the principal causes of the lamentable increase of diseases of the brain in children; but these are rendered more intensely mischievous to the offspring by the misery of mind which accompanies bad habits, and depresses the moral being into reckless despondency.

That the acquired peculiarities of mankind are hereditary, we have, then, constant evidence. Can we explain this marvel? No. We may suppose that mental habit alters the structure of the brain, and gives a new tendency to the nervous system, and that the peculiar-

ity thus produced in the parents is carried on to the offspring. But these are words without knowledge; merely an attempt to hide ignorance, the confused echo of a truism. Yet, still worse, some assert that the brain changes its own habits. The body surely can not alter itself. We can not imagine that mental education is merely the result of matter acting on matter. Mind (soul) must be at work. We must presuppose consciousness and volition: the operation of a being which perceives, wills, and acts, which can not be predicated of any combination of the elements. Every thing that can be classed with chemical agents must be material; but feeling, perception, memory, and will are not in the list of elements. If, therefore, that which perceives and wills is not material, and yet has power to impress the brain of a parent, and to alter the condition of imperceptible atoms in his blood, so that the impressions shall be transferred to succeeding generations, it follows that the parent's state of soul has a modifying influence on the ovum, and in some measure determines its after-development. It is, indeed, a wonderful fact, that the experience of the parent should produce such a bodily change in himself as to affect the future tendencies of his offspring. But so it is; each new individual inherits a predisposition according to the habits of those from whom he is derived; thus palpably proving the truth of that startling declaration,—"I will visit the sins of the fathers on the children unto the third and fourth generation of them that hate me, and show mercy unto thousands of them that love me and keep my commandments." Thanks be unto God, when good is brought into operation, the evil must wear out, but the good never! If goodness, that is, the obedience of faith working by love, were not omnipotent, society could never be improved; for propensity to sin, or to act from selfish impulse alone, is physiologically proved to be unavoidable and irresistible, unless the

spirit of holiness be imparted. But experience also demonstrates, that immorality does not necessarily continue; the entrance of true light gives new power and new direction to the soul, for then, under divine encouragement, it looks to Omnipotence for help, and finds it. The man whose heart is fixed in the worship of love, beholding the beauty of holiness as revealed in Immanuel, is no longer a selfish creature of mere propensities and impulses; he dwells with God; therefore, whatever is not pure is so far and forever hateful to him; for faith in the Divine Perfectness permits us neither to desire what is forbidden, nor to despair of what is desirable. One thought effects a total revolution in the soul. Eternal life absorbs the heart, and ceaseless prayer is the sole feeling of a dependent and yet full existence. We can not aim too highly, nor hope too ardently, since the largeness of God's promises is proportioned to his own power to bestow and man's capacity to receive; and therefore the prospects of the confiding spirit are as bright as heaven, and as boundless as eternity.

Such observations are doubtless outrageous in the eyes of spectacled philosophy, but Christians, such as Coleridge describes as living somewhat outside this world, or collaterally with respect to it, have their sight clear enough to look with discernment into worlds beyond, therefore let the foregoing words stand; some will read their meaning.

Physical development corresponds with moral qualities; the disposition of a creature is manifested in its form. The propensity which seems to determine action, exists, however, in many cases, before the organization appropriate to the propensity is developed. The boy who has heard of battles prefers the sword before he possesses the strength to wield it, and the girl presses the mimic baby to her bosom in imitation of the mother. The young ram butts at his adversary long before his

horns appear, and the young cock strikes with the heel before the spur begins to bud. Dispositions, however, differ just as much as appearances, and no two mature creatures resemble each other in habit without some similarity of structure, since bodily peculiarity is intended as the medium and accommodation of that perceiving, willing power, which acts through organs and manifests propensity in keeping with its means of enjoyment.

The propensity and the nervous organization through which it is manifested will generally be developed in proportion to their exercise. Hence the repetition of sensation begets habit, which can not be altered without the intervention of some power stronger than that which produced it, such as violent disease or great change of circumstances. The condition of the senses being altered, the sensations are altered, and diseased action of the body must disturb the manifestation of mind in proportion to the disorder of sensation, because on sensation mental association and perception mainly depend. Hence it follows, that insanity and derangement are necessarily incident to every creature with a nervous system liable to disease.

We see that when the indwelling soul can be appealed to through the medium of appropriate senses, it is capable of visibly influencing the form and expression of the features, and of controlling the body, so far as the voluntary muscles are fit for its use. And, moreover, the prominent state of mind becomes permanently written in the face, and in the very manner of the body. This can arise only from that which feels and acts, determining to a certain extent the development of the organization. But this percipient agent existed in the body before it evinced consciousness, and why should it not possess other powers of determining development beside those which are associated with sensation and will? We at least recognize the interesting truth, that

the sentient being always tends, under favorable circumstances, to render the body beautiful according to its kind. In short, the very idea of personal beauty probably implies that of a body exactly adapted to exhibit a happy soul, so that our notion of a soul, as it should be, is that of a union of beauty and bliss. This notion we learn from the fact that the spontaneous unopposed and undisturbed actings of the spirit within a child that has learned to use its senses, are always accompanied by agreeable expressions of countenance and attitude. Distortion is a violence to nature, the effect of some interference with the law of formation, growth, and enjoyment. The human soul must, then, be lovely in itself, since its spontaneous action, in association with happy minds, produces loveliness of form and deportment. The earliest expressions of intelligence and feeling in an infant, if not those of want, are those of pleasure, and in themselves are of course pleasing. If, then, the body was formed to enable the soul to experience and exhibit affections,—and these when healthy are always beauteous, —it is simply because the body and its circumstances are so far in keeping with the nature of the spirit that animates it, and therefore a free and perfect manifestation of that spirit, in whatever vehicle, must be significant only of what we are formed to admire. The body of a child, if not diseased, will continue to be beautiful in expression as long as the mind within it is kept in order by having its happier sympathies excited and exercised by fellowship with minds that manifest nothing but what is amiable. Anger, wrath, malice, and all uncharitableness, being manifested as they are by a single look, will instantly rouse the corresponding passions in a child, and these being frequently exhibited to it, will soon fix upon its features and its form the characteristics of fear and suspicion, and foster within its heart the fierce propensities that spring from them.

The human soul seeks the face for sympathy, as if constituted for sociality only through that medium—the living telegraph of all that is felt within. So strong is this disposition to look into the features for fellowship, that even a blind man, when excited by the voice of a friend, seems to see the accompanying expression of his face. Those who have had opportunity for observing the attitude of an intelligent blind person, while in lively conversation with him, can testify to the force with which his features respond to every word. He seems to watch you with his sightless face, and to look through the whole of it into your eyes. Holman, the blind traveler, says, "When any one is conversing with me, I conceive myself to see the expression of countenance as the words are pronounced, almost as if I actually saw it, and in ordinary cases, receive a similar kind of satisfaction." If the blind thus feel the presence of a face, how much more must children feel? Their souls are always in their eyes; they judge of every thing by sight. Who has not seen the infant weep when a loving face has been turned from it, or when a strange face has met its eye? As our wills are according to our love, and we become like what we love, how important it is that childhood should be familiar with happy and amiable faces. This observation may be illustrated by considering the difference in expression of countenance between those children who are trained amid benevolent and kindly attentions, and those who from birth are subjected to tyranny and neglect. Twin children would soon become vastly unlike each other if the one were watched and nurtured under the smiling tenderness of a happy Christian mother, and the other left to the violent culture of a savage breast, or the affectionless and enforced attentions of a workhouse nurse, who from the burden of her own heart can never smile, or who, from habitual licentiousness and indulgence, gives vent to some burst of

hideous passion in every look and every word. But, blessed be the mercy that still reigns on earth! the heart of woman is usually governed by the "irresistible might of weakness," and she instinctively and from her inmost heart seeks to win the smile and love of infancy by soothing expressions of fondness and delight. If it were not thus, the childish mind would more frequently write upon the face the record of misery and disordered feelings. Might not mothers learn a good practical lesson from a fact mentioned by the sagacious traveler, Nicolai, who states that he saw the most divinely beautiful female countenances among women who were most devout? It may not be unimportant to observe, that the calm contemplation of loveliness where affection blends with adoration, as in the pictures of the blessed Virgin, seems to act most powerfully in tranquilizing and exalting the features of those who thus sympathetically worship a painting. Doubtless the apprehension of spiritual truth being absolute, the reflex of the Divine Mind would possess the mind with a more heavenly idea, and correspondingly transform the whole being, provided the soul be thus engaged while the living frame retains the plastic power peculiar to the period of growth.

The operations of the causes referred to are witnessed on a large scale in the different nations of the world. Hence we find that the families of Central Asia, nursed in the cradle of civilization and morality, as first developed under traditions derived directly from the first earthly family, have from that period been most beautiful in form and most excellent in intellect. Now, however, since they have allowed the light which first shone upon them to be nearly extinguished, they are beginning to present more fully in their persons the characteristics of barbarized minds, and are rapidly falling into the state of those tribes which have wandered most widely from the center of mental and moral illumi-

nation, and have hence become more and more depraved in character and features, so that now they love their degradation well. *There* will most appear the outward beauty of humanity where the best qualities of human intellect and affection are most highly nurtured; but without a fostering encouragement, we look as vainly for loveliness of soul as for a blooming plant without the sunshine.

The intellectual and moral improvement of man is not, however, proportional to the development of his body, since, without the impartation of knowledge, and the awakening of his affections by sociality with other minds, he may possess the finest form and yet be little better than an idiot, with propensities urging him like mere brutal instincts, while his faculties find not their appropriate objects; and those attributes which are the prerogatives of cultivated humanity, like seeds in an arid soil, lie dormant in his soul, or, being artificially quickened, serve only to add intensity to his sensual impulses. Communion of mind is essential to education, but yet mental intercourse between individuals on the same level, as regards intelligence, must leave them still equal; and the superiority of perception and of thought which distinguishes one from the rest is only to be explained philosophically, in accordance with common language, that such and such an individual is more highly gifted. But what is implied in such a phrase? It can mean only, that some power above has directly communicated capacity and intelligence more freely to one than to another. The original idea of the everlasting history of each differs from all others, and each human soul presents an individual manifestation, a reasonable being seeking to enjoy endless good in his own existence by means of other existences. Thus the unity of the Divine Mind is proved by infinite variety. One spirit evokes all harmony, and none can say to another, there is no need of

thee. Each has his own qualifications and a distinct place. Thus order is the mode of divine government, and is, in fact, itself the proof and presence of God's power. *He* is not far from any one of us, and we are bound to honor each other in the mutual acknowledgment of the endowments and appointments bestowed by Him; for thus we see that Heaven is forever concerned with earth; and we are approved of him, and are representatives of him, just in proportion as we find our happiness in benevolent coöperation, and submit ourselves in humility as fellow-servants of the same Master, ministers of Heaven, each in his own office, but yet serving one another.

The more closely we examine society, the more clearly we discover the mutual dependence of the different parts of the human family; and the more we scrutinize the physiology of man, the more thoroughly shall we be convinced that the laws of conscience and of conduct, summed up in one word—love, are in accordance with the laws of bodily development and of universal nature. The development of the body in a natural or normal manner, under proper associations, induces the gradual manifestation of new or enlarged mental capacities. New states of organization and functions produce new sensations, which, acting on the ever susceptible mind, always governed by a power that causes it to seek fellowship with personal beings and bodily objects of affection, excite new sentiments; and these, again, act as excitants to the mental faculties; and hence the finest feelings are usually, perhaps always, associated with the finest intellect, and the love of truth with the love of goodness. Knowingness is the opposite of wisdom. Showy minds are insincere, strong ones never; for these found their reason and their conduct on felt truth. Thus we find, that under right tuition—that is, under the kindly fostering of social intelligence and affection, which of

course includes religion—the mind, in all its wondrous endowments, is steadily manifested by degrees, according to the regular laws of healthy progression in growth and maturation of the body, and that not in capacity of attending to facts only, but also in respect to moral discrimination. And here, before we extend our views of the stages of life, we may learn a surprising lesson, by reflecting a little on the positive evidence we possess, that the percipient and thinking being is capable of still further and more wonderful manifestation under the stimulus of morbid peculiarities of nervous and other organic condition. Thus, in some acute diseases, the intellectual faculties often suddenly evince themselves in so marvelous a manner, that many persons have endeavored to account for the phenomena by supposing supernatural interpositions.

As Cabanis observes, "sometimes the organs of sense become sensible of impressions foreign to the nature of man. There are some who easily distinguish microscopic objects with the naked eye, others who see sufficiently clear in the most profound darkness to guide themselves with confidence. There are those who follow persons by their track, like a dog, and recognize by the scent the objects which these persons have used, or which they have only touched. I have seen those in whom the taste had acquired a peculiar delicacy, and who desired or knew how to choose the food and even the remedies which appeared really useful to them. We see others who are in a state to perceive in themselves, during the time of their paroxysms, either certain crises which are preparing, and of which the termination proves soon after the justness of their sensations, or other organic modifications attested by those of the pulse, and by other signs still more certain." The statement of such a witness will scarcely need attestation, but we may confidently refer to the multitude of instances recorded

by men of sufficient sagacity and truthfulness in confirmation of the fact, that the human mind may be manifested in an exalted manner under certain conditions of the nervous system induced by mental determination, and perhaps by the concentration, to particular parts, of that subtile fluid which pervades the body, for asserting the existence of which, Mesmer and his disciples have been so unphilosophically ridiculed. The inductive experiments of Baron von Reichenbach leave us now but little room to doubt that animal magnetism is a natural truth, of great value and importance to society, notwithstanding the egregious extravagances of fancy which have disfigured its history as a science. When we consider that intellect is modified by matter, and that the soul employs machinery to obtain sensation, and to exercise will, we shall not be surprised to find that changes in the state of the instrumentality alter the mode of manifesting faculty. The sentient principle is governed by laws which are, to some extent, coördinate with those of organization. Thus the number of ideas at any time capable of being reproduced to our consciousness seems to depend on the state of the body at the time, and every change in the condition of the brain is accompanied by a corresponding change in the visions of the mind. Yet forgetfulness and recollection are not random results, but consequences of the plan of God, in which we are constituted to lose sight of one part of our knowledge, and to remember another according to the circumstances in which our bodies may be placed, so that we may act in keeping with our position. If it were not thus, we should always be in danger of insanity, or, by pursuing ideas irrespective of present objects, pass our lives in unsocial or unobservant abstractedness of spirit.

Alterations of bodily condition only change the direction of the percipient soul, the qualities of which remain the same, whatever its state of accommodation; for all

the faculties exist in all states alike, and only require to be put in proper relation to objects to be manifested accordingly. The very fact that we are liable to vast changes of condition, and yet continue the same beings, subject still to hopes and fears, pains and pleasures, of the same essential character, is a proof that we are something more than living machines and locomotives. A just view of preceding facts will prove that a person who habitually acts conscientiously, will, in proportion to his intellectual refinement, be best able to detect erroneous principles, for such a one perceives truth as if intuitively, and scarcely tolerates the tardy ratiocination by which the majority wait to be persuaded. But such a character is not the spontaneous production of nature, for the disposition to obey God arises only from the entrance of the divine *logos*, which imparts its own light to the simplest understanding, and enables the soul thus rendered truly great, to

"Dart forward on the wing
Of just ambition, to the grand result."

CHAPTER VII.

THE STAGES OF LIFE.

Mankind spring not up full-formed, and quite equipped for battling with adversity, like the fabled army from the teeth of dragons sown by Cadmus, but like the seed which is scattered from the hand of God over all the earth. The germ of each man is imbued with the power of an indwelling life, fostered by the genial influence of Heaven, and superintended by the might that made it. Thus it expands into bloom and maturity, a being fit for fellowship with Eternal Intelligence. As the plant has its periods of growth, completion, and decay, so have we the spring, summer, autumn, and winter of earthly existence; but the analogy holds no further than as relates to the successive stages of bodily being. The gradations of the moral being, though following an order, for the most part, in beautiful correspondence with the seasons of life, are proportioned in their progression rather to the amount of appropriate sensibility elicited from the soul by the sweet socialities of relationship and kindliness, than to the degrees of physical development. The infant smiles in response to the visible love of its mother's heart long before the struggling will meets the disappointment that engenders tears. The earliest expression of the spirit, fresh from its Maker's hand, is of needy dependence on his power, but at the same time speaking of the love that formed it, and thus assuring the vigilant heart of affection, that as parental solicitude and infantine dependence mutually and natu-

rally seek and create hope and joy, so the God of families will truly bless confiding and loving spirits. The faith of the child accords with the feebleness of its body and the experiences of its mind. Thus we learn from what we feel to trust that charity which inspires the maternal bosom, and to regard the affection which we feel, as an unquestionable evidence that the Almighty Parent loves beyond the conception even of a mother's heart. And the utterly incapable little one, as yet without a conscience, unfit for any thing but to demonstrate the force of feebleness, prevails to manifest the same delightful fact, and to teach us, with a sensible argument, the same sublime and lovely lesson—namely, that He who is omnipotent to produce is omnipotent to sustain, and thus, by simple, confiding, trusting weakness on the one side, and unfailing, unbounded affection on the other, to reveal within us how God embraces all his creatures with an infinite love. This power of loving, natural and supernatural, is the spirit of prophecy in every human and affectionate breast, and it tells us never to despond, but, in spite of clouds and darkness, to believe in constant light, and, notwithstanding ever present evil, to expect eternal good. If the instruction acquired by the study of infancy and its demands direct us forward as it ought, we shall discern indications of the same benevolent purpose in all the stages of life. It is true, that the work of the Almighty seems often to be frustrated; the sinless babe, the eager boy, the hopeful youth, the energetic man, are often abruptly snatched away, and seemingly not allowed here to answer any sufficient end of existence. Death meets human beings at the entrance of life, and breathes upon them as he passes, and to earth they perish. The purpose of mind and development appears disappointed, as if from defect of means, or deficiency of power, to accomplish it. But impious in its ignorance must be the mind that thus concludes.

Are we not taught by these apparent failures, that Almightiness has other dispensations and other worlds connected with this, but still in reserve, when and where to reconcile his permission with his power, and to satisfy our craving reason with a full revelation of His glory, as the accomplisher of what we in our faithlessness had deemed impossible? Let us wait, then, for the explanation of enigmas which we can not solve, and content ourselves with the facts that discourse to us so plainly of divine gentleness and favor, in the might that constitutes the child, and actually takes it by the hand, plays with its tiny, restless fingers, looks into its eyes, awakes its emotions of trustfulness and gratitude, presses it to the heart, dandles it on the knees, and leads it along with the tender help and encouragement of a mother's touch. Thus the Deity himself is revealed to us.

If we would avoid injuring a soul, we must treat the body with tenderness and wisdom. A young child is a newly created spirit, introduced into this amazing world for the purpose of obtaining a knowledge of material things and of sentient beings, by contact and sympathy. It is utterly ignorant; but, unless the brain and senses be defective, it possesses, and by degrees can exercise, all the mental qualities of a philosopher, gradually becoming acquainted with the properties of objects, both of thought and sense, by observation and experiment. All the faculties of childhood are busily at work as fast as they are developed, and every propensity is ardently seeking for indulgence. Propensity, in short, is a bodily provocation to action; and the soul must yield to it, if it knows not any better means of pleasure; for the soul always does, and always must, aim at enjoyment. But that is properly found only in a suitable use of the body—a use for spiritual ends. Almighty benevolence has formed the body for happiness when rightly employed; and the means of that employment

must be provided, or activity becomes a constant perversion of power, and therefore a constant source of uneasiness. But as human individualism is a type of Deity, its perfection, its full capacity for happiness, is only found in goodness and love; therefore it never can rest satisfied with its knowledge till all creation is completely harmonious and happy. The pure enjoyment of a human being is *now* derived through the senses, by which alone it obtains proof that it is in its proper place, with regard to others and its own convenience; therefore its senses must be cultivated, that it may find, through a bodily correspondence, the fellowship it needs with other human beings and with nature. A child, with all its senses perfect, requires only instruction and sympathy to complete its education. But what a fullness of meaning lies in the word education: the leading out of an immortal being to the fulfillment of its proper desires; the directing, by moral governance, all the faculties, affections, and propensities to right objects, including, of course, the due exercise of the organization subservient to them. Who is sufficient for the vast undertaking? *Nil desperandum.* God and man are both engaged in it; therefore try, and you will succeed. The mother's heart and the father's heart are ready for the task, as soon as they are themselves under heavenly tuition, and not till then. What they want is what their children want—divine light, right motives, and a suitable sphere of action. The Word of God and his works are open before us, and these contain all that can be taught either by us or by angels, and we shall not fail rightly to impart our knowledge of them if we feel aright; for then action will speak, and our example will illustrate our precepts, and our very bodies be the means of bringing the minds of our children, through a vital sympathy, into moral relation to ourselves. Imitation will impress moral principles as habits upon the nerves of our chil-

dren, if they see in us the beauty of true affection and true governing wisdom, which they can not do unless we prove ourselves conscious of duty and obedience to a holy will. The royal law still holds good. Let each man and each woman who has to do with children, imagine the circumstances of each child, and then let just that intense love, and tenderness, and patience, and firmness, be shown, in guiding and blessing the little one, that each would desire for himself, under divine and human management, in the like case. This is the whole secret of correct education, and therefore real Christians alone are fit to carry it out; and this they must do according to the terms of the new covenant, as far as each one may be able. God speed and encouragement, are the Christian's watchwords; Charity conceals faults, is his motto; and this signifies that encouragement afforded to every good disposition, will at last triumph over every evil in the establishment of every moral excellence; because true love is God working in us to restore his own image in our spirits. This is the end of the education which he sanctions, and no other is fit for man. The fire and smoke of terrorism are quenched by the light of Christianity. Jews and heathens may retain threatening and corporeal punishments; but these methods of persecution keep men Jews and heathens. We have a power above them, and we ought to show it. Love animates, fear paralyzes; love is mightier than earthquake in stirring up the soul to strong and enduring effort. It never fails. The highest class of heroes are trained by Charity; because she is the most determined of all teachers, and can not despair God disciplined his followers into men indomitable in truth, by showing them his gushing heart. It is open to us. We see that love, truth, and wisdom are united *there*, and the doctrine which flows from it is gentle as light, and as mighty. The rod does not impart princi-

ples, but Truth does; and she is severe enough, since she will not suffer a wrong unrepented of to go uncorrected, but she makes the instructed soul correct itself by appeals to right affections, and thus she never fails to lead her pupils to a happier position by promoting intimacy with God in all his works.

The education that does not assist to invigorate the body is injurious, and all that favors continued inaction fosters idleness and debility. The young child has a nervous system at least five times larger, in proportion to its body, than the adult. Hence the restlessness and animation of childhood, its quick exhaustion, and ready recovery, its power to bear rapid and varied movements, and its intolerance of monotony. If we do not consider this nervous constitution in training children, we shall do violence to Heaven's laws, and inflict injury on them with woe to ourselves. Well conducted mental training invariably favors the better development of the body, and, by strengthening the nervous system, tends to render all the vital functions more vigorous and regular. As the mind not steadily and determinately employed, fails to stir up the bodily energies, it of course allows a corporeal indolence which confirms its own listlessness, and at length causes both mental and physical effort to become alike difficult, awkward, clownish, and heavy. The mind hopefully and outwardly busy affords the healthiest stimulus to the brain; but the soul without sufficient motive, and left to the desultory impulses of ignorance and accident, is always either violently agitated or corruptly stagnant.

In boyhood and in girlhood germinate those sympathies which ripen into the reciprocities which constitute the charm of society, and confer all that is excellent in manly or in feminine virtue and dignity. In childhood the expanding heart importunately demands kindness, and is as ready to communicate as to receive, according

to its ability and understanding. But on advancing a little further into life, the feeling of new necessities, and the general aspect of others toward us, force upon the will a felt propriety of standing more independently of parental guardianship. The possession of more bodily power gives us the desire to exert it for ourselves. The pride and emulation that properly urge us to obtain what is acknowledged to be valuable, now stimulate our efforts. This is the turning point of life. According to the direction now taken, is our intellectual and moral destiny on earth generally determined. The ideas, at this period presented, modify and color all the future, because the sensibilities of the body are at the height of fervent intensity, the senses keenest, the brain most impressible, and the vital energies most ready to incorporate impressions; and hence the soul is most alive to the conduct of others, and is most ready to sympathize with nature in every aspect. Hence, as Juvenal says, "*Maxima debetur puero reverentia.*"

In the transition from the state of affectionate obedience to that of comparative self-reliance, the sense of social kindness is most powerful, and the effects of evil example and of tyrannical rule most mischievous; for then, if the reasoning faculties and human instincts have been duly trained by domestic discipline, the heart becomes more alive to those emotions which magnify the interests of life, and a higher state of development occasions greater vigor of function, and new sensations suggest a multitude of new ideas; existence seems suddenly expanding, and the young being feels conscious of demands upon his intellect which his experience does not enable him to meet; he compares himself with others, and then modesty and diffidence kindle the blush, and awaken the soul to doubt and apprehension, lest its desires, sentiments, and endeavors should be misinterpreted, and meet with derision when most demanding

sympathy and assistance. Then commences the period of true temptation and of danger; the informed soul struggles for mastery over the body, and conscience is at war with instinct. If the ingenuous spirit be not now met with Christian encouragements and admonitions, the bashful youth may be driven to desperate expedients to subdue his excessive sensibilities; and finding the inconvenience of being more timidly sensitive than those about him, he may, as if from a necessary determination, rush for relief into the opposite extreme of boldness and effrontery.

It is astonishing how early this spirit of bravado springs forth in acute and intelligent children, whose sensibilities have been suddenly placed in opposite states. Thus the pale and shy brother and sister who wept with a widowed mother in her honest and hard struggles against a crushing and unaccustomed poverty, being left by her death with none to love but each other, and then singly exposed to the ruffianism of matured vice in every form which the crowded union-house can afford, naturally learn to hate all that cold kind of charity which they witness; and usually finding thieves and prostitutes with more heart, and, perhaps, less hypocrisy than their public guardians, they are readily won to side with those outcasts against their better knowledge, and every now and then astonish us by precocious feats of hardy viciousness. Thus a youth, in the heyday of his warm blood, meeting no heart established by true affections to sustain and direct his love of approbation in an honorable and happy manner, tries to set up for himself with a premature and ignorant defiance. Thus he quickly falls a victim to the selfish delusions of vice, since, without the pleasant guidance of sympathizing friendship, he seeks fellowship with the friendless, or even with the depraved, as the only refuge left him from blighting, dreary solitude. By the very constitution of his body and soul,

he must associate; the crowding fancies of his mind, and all the tendencies working in his physical frame, compel him to live outwardly with others, or else to droop and despair under that burden of self which either breaks the heart or maddens the brain.

Self-abandonment is the misery nearest to self-murder. Our nature must be selfish until taught by sympathy the loveliness and delights of generous affections; and these we must witness in others before we can feel to the full in ourselves. Why then should we wonder to see children of the shrewdest intellect and most susceptible forms, beautiful even in depravity, the readiest and deepest in guilt when left only to the sympathies of incarnate demons? Men and women, fathers and mothers, brothers and sisters, your hearts are demanded by the outcast and the abandoned! And if you feel as you ought, the necessities of sensitive childhood and youth, not merely in your homes and among yourselves, but in vile places, where the messengers of heaven should visit, much of the now prevalent depravity of the social system would be cured, more would be prevented, and many a determined, manly heart, many a sweetly feminine bosom, would be opened, and governed by the inspiring truths with Jesus taught. If you would be mighty, be kind. Why is kindness full of power? Because it is happy, and makes happy. It assures us that we are not alone; it takes possession of the body with all its springs of nervous energy, heals the wounds of the spirit, and thereby imparts new vigor and warmth to the current of life. It reanimates innocent dead hopes, and draws us from selfish purpose to a high kind of self-abandonment, by causing us to prefer the disposition we see in others to what we experience in ourselves, and puts us in felt bodily relationship with those who are governed by a fine faith in the goodness of Omnipotence. The beautiful old word, kindness,

means something like family feeling, kin, kind, kindred, kindness; the home spirit is in it, and brings back to our memory the mother's heart and the infant's trustfulness. Let all the angels of heaven go out to reclaim a degraded man, they will avail nothing unless they can approach him in the human form of kindness, visibly embodied in like nature to his own. They must draw him from solitude by manifest sympathy, not that of sorrow only, but of fellow-feeling, even to the evidence of having also been tempted like himself. He can respond only to one who knows experimentally the urgent demands of the body, and in it has felt the struggle and the strife with Satan, sin, and death, and in it conquered them. He must learn by looking on an example, that it is God and not man that triumphs over evil. He must know how the Father pities the prodigal, weary of his lusts; and God himself must meet man as man before He reveals His divinity by bidding man believe in love, and sin no more. Therefore, be kind.

Christians in this land of parishes, where is the proof that you deem children heirs of immortality, and the special charge of the church? Remember that the soul of man and woman, when left to the working of untaught nature, must ripen into desolation and misery. And it is in early youth that your most strenuous efforts are most demanded, and most effectual. If the attention be not then duly employed on suitable objects, which the wise alone can present in their true shape and color, the mind will fix itself upon the body, and either a morbid consciousness will spring up in the place of happier activity, or else sensual propensities will speedily entrance the captive and ignorant soul, and fling a spell over all its powers, not to be broken but by a miracle of divine interference to restore it from the ruin which the godly discipline of Christian institutes was intended to prevent. The youthful body must be engaged in Chris

tian business, in order that the habit of right feeling and thinking may be established in the soul. Christianity agrees with the body as well as with the mind, and it alone is the spiritual system of morals, for it is a word seen, felt, and handled through the sensibilities, and, so to say, in the very functions and framework of the body, in the child, and on through the stirring period of boyhood and youth and maturity, preserving thus the unselfish affections in the vigor of faith, amid the struggling urgencies of earthly life. Without it, corporeal strength will but impart ungovernable force to evil. Unless the soul be all along accustomed to the precept and example, and the active associations of those who control themselves for the benefit of others, it is impossible that teaching should subdue the tendencies and propensities of the body, so as to render them stimulants to spiritual improvement, and qualify the soul to use the senses merely as instruments for acquiring knowledge and enjoying the happiness of truth. If we would feel aright, we must come into sympathy with those who are right; we must enjoy communion with human excellence manifested in a well governed body, that, being infected by the visible happiness of others, our own will may be subdued and brought into healthy action.

It is when the frame and spirit are all alive to the vivid beauties of nature that kindly associations tend to fix indelibly and practically upon the memory a feeling of God's benevolence seen everywhere; and then, too, the beauty of holiness is felt to be an attribute of the Creator. Then the tender heart learns the poetry of life, the thought of which "breeds perpetual benedictions," and faith is nourished with angel's food:

> "The truths that wake
> To perish never;
> Which neither listlessness nor mad endeavor,

Nor man, nor boy,
Nor all that is at enmity with joy,
Can utterly abolish or destroy."

This kind of poetry is better than logic; it is intuitive truth, and therefore essentially related to religion. It adds a grace to the generous impulses that belong to youth, and sustains the imagination in a devout desire for a still more beauteous dwelling-place, where it may enjoy the fulfillment of its prophecies.

A consideration of the influence of sex on the formation of ideas and of habits, will abundantly instruct us concerning the development of mental character in certain dependences on the condition and peculiarity of the body. But in this place it will suffice to observe, that both sexes are equally indebted to the divine wisdom which devised the plan of teaching us ideas by degrees, and in different stages of corporeal advancement, so that we may grow up into the most wonderful knowledge without the surprise and confusion that would otherwise result from the crowding of sensations into a sudden maturity. Woe to those who regard even the merely sensual relations of sex in a profane manner! Not to feel the holy beauty of God's purpose in the respective endowments of male and female with respect to love and truth, life and religion, is to prove insensible to that sublimest evidence of divine adaptation, pure conjugal union, and the perpetuation of the grand mystery of existence, the multiplication of immortal beings through bodily relationship. The light of the soul will soon be quenched in darkest sin, if the personal attractiveness of sex serve only to arouse fond sentimentalisms, or to feed the flame of torment for the base sensualist.

We form ideas before we reason, and delight in the use of sense before we learn the properties of material things. Ere the mind can speculate we enjoy creation in all its attributes, and thus the Almighty implants

within us a conviction of reality, not because we first think and then perceive, but because we see, we hear, we taste, we feel, and, by an intuitive faculty and a spiritual inspiration, each image, each impression received by sense, is inexplicably associated, and that perpetually, with some external thing; and thus the wonders of the world we inhabit are gradually reflected from within us, and an ideal universe is created, amid the marvels of which the rational spirit expatiates forever.

Each stage of life prepares for succeeding stages, and each, when properly conducted, enjoys a new happiness, without necessarily losing the peculiar enjoyments of the past; for our existence is enlarged by addition rather than expansion; and the man of years may still delight with childlike freshness in the objects of creation, not merely from their novelty or fitness to his senses, but also because they all convey a fullness of meaning which experience has taught him partly to interpret.

The stages of bodily development follow a regular progression up to maturity. Infancy, childhood, adolescence, youth, manhood, are marked by sufficient distinctions, and the period of one is seldom considerably prolonged into that of another. Whatever causes the arrest of general development tends also to abbreviate life; and, perhaps, the chief cause of so much mortality in its earlier periods may be attributed rather to the absence of those means of natural enjoyment which favor the powerful growth of the organs, than to any peculiar liability to disease.

The vital resistance to malady is remarkable in childhood; but the habits of adults, in great towns especially, being so thoroughly unnatural, poverty with excess of labor oppressing the parental heart on the one hand, and the prevalence of ignorance and vice depraving it on the other, it is scarcely to be wondered at that the proper demands of infancy should be so little understood or at-

tended to, that one fourth of the deaths among children occurs under one year of age; one third under two years; and considerably more than half under five years of age.

Happiness is health. So strong is the faculty of enjoyment in every stage of our life, that every individual in a healthy state, with suitable objects of attention and motives for action, is naturally happy. But, alas! if health is happiness, few indeed possess it. Whatever impairs the means of sober enjoyment, so far impairs the functions of the body; and therefore, as in the clash of opposing wills, men's minds jar with each other, while maintaining individual interests, the general good is too often sacrificed, and both happiness and health are immolated on the altars of Mammon and of Moloch. Would that men could be instructed everywhere to feel that their interests are mutual, and that, if they would submit cheerfully to the claims of brotherhood and charity, every period of life would embosom its appropriate joys; and death, which is the degradation of man, would not so often be invoked by the weary mother as she gazes in tearless agony on her suffering child. It is the helpless and uncomplaining weak against whom the selfish strong are at war. The brutal law of government by might, which causes the herd to butt to death those that are too feeble to defend themselves, is operating also among human beings. This is the very spirit which Christianity is to destroy; and blessed will be our land when her institutions, conceived as they generally are in this spirit, shall be carried out in its power; for then the highest law, that which rules in heaven, shall conquer by kindness, and bring society so completely into subjection, that, itme and opportunity being commanded, the plan of God in social and individual development shall be fully seen, in health and happiness, religion and piety, established through all generations.

In the present order of things, where so much impediment to what we know of divine calling and purpose so evidently exists, it is still delightful to find innumerable traces of the benevolent Creator's hand evolving good out of evil. Whatever renders life undesirable, so far tends to shorten it. Thus longevity is a positive blessing, because it indicates that the mind has not been so directly distressed as materially to interfere with physical enjoyment. Mental comfort and physical well-being must combine, in order that an individual should attain the utmost duration of earthly life. Whatever deprives us of suitable pleasures in childhood, leads speedily to death or to idiocy; and in maturer life, hastens on decrepitude, which, when once established, allows no restoration to vigor. But the period between the maturity of power and its final decay may, with proportionate activity, be vastly prolonged. Indeed, the extent to which the compensating powers of life may, during perfect manhood, tend to preserve the balance, has never been fully proved. The numerous instances on record of great longevity indicate a tendency in nature to a constant renovation. In the patriarchal ages, when neither the body nor the mind were subjected to unnatural excitation, the period of three score years and ten was attained with scarcely the slightest diminution of the buoyancy and vigor of matured manhood; and instances are not wanting among ourselves to show that the mental faculties may be in high and vigorous exercise far beyond the climacteric epoch.

From these facts we learn, that although there are definite periods of transition from infancy to age, yet the passage of the perfect man into drooping senility does not exactly follow the same law of progress, and that he who is a ripened man at thirty is not necessarily a decaying old man at seventy. The reason why there is this possibility of prolongation will appear, when we reflect that the preceding periods or stages of life are but

preparatory to the grand purpose of man's animal existence—namely, the formation of mental character, and the production and training of offspring. These great objects, the greatest of earth, could not have been properly accomplished, unless the parent continued in the possession of much mental energy and physical power long after the mother ceased to bear children. It is after this period that the parental judgment is at the acme of tried experience, and is most demanded to influence and control the expanding energies of their offspring. Now the staid man speaks with the authority of that inwrought knowledge, that approved power, which secures the attention and respect or reverence of all who are sedate enough to desire wisdom, whether in the social circle or in the arenas of political or religious contention; for society is governed well only when the sobriety of mature experience qualifies the ardency and eagerness of youthful aspiration. This union of zeal and knowledge preserves the equipoise of society. Thus theoretic enthusiasm is required to become practical, the novel statesman to prove his claims to be called a patriot, the fanatic to show his reasons, and the pious zealot to indicate in his own character what he means by calling himself a saint.

The wisest and best productions of human intellect have proceeded from those who have lived through the bustling morning and meridian periods of their day, and calmly sat down to think and instruct others in the meditative evening of life. Even when the brilliancy of reason's sunset yields to the advancing gloom, there is an indescribable beauty haunting the old man still, if in youth and vigor his soul was conversant with truth; and even when the chill of night is upon him, his eye seems to rest upon the glories for a while departed, or looks off into the stars, and reads in them his destiny with a gladness as quiet and as holy as their light. When our little day is folded

up in shadows, the darkness must be deep indeed which does not reveal eternity by the rays of light that reach us from afar; but the soul that can rise above the clouds of earth, can always behold the infinity of heaven, and perhaps every rightly taught man, before God takes him, ascends to a Pisgah of his own, from whence to look farewell to the wilderness he has passed in the leadings of Jehovah's right hand, and to catch a glimpse of the promised land lying in the everlasting orient before him.

How instructive is the usual state of memory and hope in advanced life! As the senses become dull, the nervous system slow, and the whole body unfit for active uses, the old man necessarily falls into a constant abstraction. Like all debilitated persons, he feels his unfitness for action, and, of course, becomes querulous, if improperly excited. Peacefulness, gentle exercise among flowers and trees, unstimulating diet, and the quiet company of books and philosophic toys, are suitable for him. With such helps, his heart will beat kindly, and his intellect, however childlike, will maintain a beautiful power to the last. Objects of affection occasionally move him with more than their accustomed force. Young children are especially agreeable to him. When approaching him with the gentle love and reverence which unspoiled childhood is so apt to exhibit, his heart seems suddenly to kindle as the little fingers wander over his shriveled hand and wrinkled brow. He smiles, and at once goes back in spirit to his childhood, and finds a world of fun, frolic, and loveliness all alive before him, and he has tales of joy and beauty which children and age and holy beings can best appreciate. Next to the children of his children, the old man, whose thoughts have been directed by the Bible, loves the society of persons of holy habits, and as he finds these more frequently among females, such are generally his associates. But all aged and infirm persons he deems fit company, because they, like himself, are

busied in reviewing past impressions rather than planning and plotting for a livelihood, or reasoning about ways and means. The past is his own, and he cons it over like a puzzling but yet an interesting lesson. If his soul have been trained to delight in truth, his will becomes weaned from this world of effort in proportion as he feels the weakness that disqualifies him from struggling on in it. Yet *in the ashes lives the wonted fire:* he feels an internal, a spiritual energy, awakening in a new manner the sympathies that belong to his being, and he feels as if his affections had been laid by to ripen into an intensity out of keeping with the usages and objects about him. He realizes most fully the fact of a coming life, and even now lives apart from the present; and if his habits of reflection be not distracted, and his heart broken by hard and ignorant treatment, and if his soul have not been wedded to care by a love of gold without the possibility of divorce, and Mammon have not branded his spirit with indelible misery, then is the old man ready to enter on a purely spiritual existence with alacrity and joy. If his employments now suit the state of his body, his feelings and his thoughts are already accordant with a better world. His memory and will are in general so occupied by merely mental objects, as to convince him, as if with the force of a sensible demonstration, of the reality of things beyond the scope of sense.

But it is not the aged only who thus live in memory and imagination; all who from weakness or physical disorder are unable to exercise the senses energetically, are employed in the business of reflection or of retrospection, from which, of course, fancy commonly still travels on in company with hope. The past and the future are linked by the spirit almost without perception of the present, or rather they are all one to the soul, for it thinks and feels not in tenses, but in moods. And does not this experience prove a design concerning man

beyond this life? The might of our Maker is not the mere play of Omnipotence. The impartation of a power within us to register the past, to examine the record, and to draw from it motives and desires for the future, surely indicates that the Creator of our minds anticipates our exigences, and prepares for our spirits an appropriate abode. Thus, when disqualified for this outward world, we retire to the inner one of ideas, and are at once ready for another life. And as we now turn in an instant from things to thoughts, as unconcernedly as an infant sleeps, so will our great change come, in the twinkling of an eye, complete without surprise. If all end here, we dare not say we discern the wisdom or the love of the arrangements we experience; but with the understanding that the soul lives on, through and beyond all scath and decay of the body, and enters on enjoyments hereafter which are built upon the basis of the past, reason is satisfied with the good hope, and waits in patience for the true fulfillment of all ordinances, convinced that beauty and bliss in the creature are essential to the full revelation of the incommunicable attributes of the Creator.

CHAPTER VIII.

THE SENSES, AND THEIR OBJECTS.

Perception is a power of the soul which, while connected with the body, requires a certain arrangement of matter in organized and living forms fitted to the objects that, through them, become the causes of sensation. The structures adapted to this end are called organs of sense. By these we are put in relation to material things, as to their qualities of color, sound, odor, weight, resistance, and all that we learn of time and space by contact with matter. Unless we are to conclude that our Maker has constructed our senses to deceive us, we must believe that the impressions received by them while in a sound state, and interpreted by the intellect naturally excited by their use, are real and true indications of real and true objects. If the theory of ideas which transcendental philosophy is now so intent upon urging upon our credence, is to supersede the common intelligence of our senses, as to the qualities and positive existence of things, the language of nature and revelation must be rectified, since both at present only tend to perpetuate mistake and confirm the error which induced the first man to impose names on creatures according to what he perceived of their properties. The vocabularies of science and of common sense must be reconstructed; not, however, according to the consent of those who agreed to adopt them as they are, but just as may suit the ideality of each individual. Thus each one will build his own Babel, and experience a confusion of words and meanings in his own mind

worse than that which caused the dispersion of mankind.

It is by the reality of objects, or by our universal faith in their reality, that society is held together. From mutual understanding, we acquire the means of communicating with each other. Light is the same thing to others as to ourselves. Those who are blessed with eyesight, and have learned to use it, can enjoy the many appearances of radiance and beauty with which the sunshine clothes the heavens and the earth; and, happily, they are in no danger of supposing that what they behold is nothing but the creation of their own imaginations. It is true, indeed, that the soul forms its own conceptions; and the material world might as well have never existed, had there not been spiritual beings constituted to behold it. But as surely as there are persons to perceive objects, so surely are there objects to be perceived; and the very fact of consciousness is a proof of the existence both of a percipient being and of real objects of perception. The evidence on which I believe that I am, is the same as that on which I believe that others are. Idealism, rationalism, neology, and all other transcendentalisms are but the more mysterious offspring of natural mystery—the shadows of shades, taking forms according to fancy in the twilight of philosophy. Those who turn their back upon realities and the glory that reveals them, substitute their own conceits and inventions for true discoveries, and then fall down and worship the creations of their own imaginations, instead of going on to learn the doctrine of facts in the deductions of enlightened reason. Many act as if they deemed themselves the ordained apostles of ideas, who yet scorn to acknowledge faith either in the Word or in the works of God. But surely man has no means within his reach of acquiring an intimacy with truth but in the humble study of those objects which the Almighty

has provided for him. If we are to reason and believe, we are to see and know the handiwork of God. The cause of thought and the end of thought are one—the Eternal Mind. Creation is the normal school of all intelligences, and the history of the acts of the Divine Being furnishes the whole course of study, and every lesson is only to teach us confidence in him.

Away, then, with the idealism that would persuade us out of our senses, or leave us loose in a chaos of nonentities. Let us thank God for his endowments, use them rightly, and while rejoicing in the riches of an inherited universe, let us not fall down in adoration to any *thing;* but while acknowledging all things as, indeed, but symbols of the present Deity, let us learn from his works the vastness of omnipotent design; let us look back and recognize the Eternal Creator; and look forward with the feeling that we belong eternally to him in whom we possess an everlasting sufficiency.

From these high thoughts we will now turn to reconsider the means through which, in this world, the Almighty instructs us. The senses are generally said to be five in number; a little reflection, however, will convince us that there are other modes of experiencing sensation beside those of sight, smell, taste, hearing, and touch. There would, indeed, be no impropriety in regarding every part of our bodies as an organ of sense, since every part is endowed with a kind of feeling peculiar to itself, and exactly suited to its office. Probably all sensations are but modifications of the same nervous action, and they may all be regarded as the contact of an active agent with the organ, or of something moving, or tending to move, operating on nerve. Thus light must touch the retina to excite sight; the air must vibrate in the tympanum to induce sound; the perfume must be breathed over the olfactory nerves; and the sapid morsel must be dissolved upon the palate

to cause taste. The special organs of sense convey to our souls definite information by which we discern our relation to the external world, and hence the health of the mind, as the manifestation of intellect and emotion, depends upon the integrity of the senses and of the nerves with which they are immediately connected. Every change in the state of the body is a change in the experience of the soul; and as long as they are healthily connected, the alterations in action are reciprocal. Every emotion is accompanied by a corresponding state of brain, and every change in the brain's condition in a like degree affects the character of consciousness. But yet the soul derives none of its faculties from the body: it only takes advantage of the senses and their relation to the brain to form ideas; but then it is manifest that it must inherently possess the power of so doing. The knowledge of objects is acquired through the senses, but sense itself does not confer the perception even of things, much less of thoughts. To the soul belongs the reasoning power by which we infer from facts; and this power employs memory, imagination, and comparison, and thus believes truths which can not be presented in any form to the senses. Hence we are susceptible of moral and religious education, through faith; but the faculties of man, as a religious being, are not developed without the intercourse of different minds under different experiences; and man's mind can not be elevated above mere bodily perceptions but by superior intelligence bringing within the sphere of its apprehension ideas of a higher nature, and thus supplying motives originally above its own. Thus the ideas of immortality and of divine love must have been first taught to man by some being to whom these ideas were familiar, and in whom they inherently existed, since man could not have obtained them merely from the use of his senses, in a world where suffering and death are so common.

The Bible contains the only intelligence that is granted to us concerning our capacity for future existence. From this book we learn, that when the body dies, the soul that used it departs to some other sphere; the associations and the accommodations of which differ according to the character of each individual when summoned to receive his decisive appointment. When we look into the infinite abyss of worlds which the darkness of night and the light of the stars reveal to us, we can conceive no vacancy, no sphere unoccupied by physical existence; and we are forced to imagine that each departed spirit finds its appropriate place amid the multitudinous orbs that, hung upon light, revolve together in order as when first flung from the hand of God. We may still suppose some vehicle of thought and will; some medium by which created mind may receive impression from matter, and act upon it. The physical theory of another life is an admissible speculation; but as the data on which to reason are scarcely sufficient to form a foundation solid enough for any but the superstructures of Fancy, we may wisely endeavor to turn our eyes from the aerial visions conjured up by that magician, and content ourselves with the sober realities within our reach, and which are mysterious as well as important enough to demand and deserve the best use of our faculties. It imports not to infer or to fancy what is reserved by our Maker for the future experience of our souls, since he has assured us that "it has not entered into the heart of man to conceive what he has prepared for those that love him." Let it suffice for our purpose to gather fresh evidences of his love toward us, and then we shall trust our eternal future, with a quiet joy, the gentle might of the Infinite, as an ignorant child trusts the affectionate parent's hand for guidance, his heart for sympathy, and his forethought and his wisdom for provision. *The Father* knows our

wants. The constitution of our bodies is no less a proof of his skill than of his kindness; for as he has gifted us with minds to reap a rich harvest of enjoyment and of knowledge from this world, so has he furnished us with instruments by which to manifest our faculties, and with which, indeed, they so exactly correspond, that we scarcely ever imagine the existence of the one without the other, as if the mind, to act, could scarcely exist without the means of action, or the desire of pleasure without the capacity. The exceptions to this harmony of benevolence are so rare that we forget we live, and move, and have our being in God, and that He has so arranged the elements and atoms of our vital framework, that they obey the behests of the mind, and, as a rule, even in this world, render us, both in thinking and acting, happy.

Some of the prominent peculiarities of man's formation are especially worthy our observation, since we discover in them the visible signs of man's transcending spirit. "Pronaque cum spectant animalia cætera terram." Animals may be beautiful, but man is sublime even in his very form. He is evidently made for thought as well as for action; and a majesty resides on his brow which of itself sufficiently proves his right to the dominion of this world. He is clothed by his Maker with a dignity that indicates that he is not to stoop except in adoration, and that he is incapable of being degraded except by bowing down to things below him, and worshiping the creature rather than the Creator.

The erect posture, the perfect hand, the delicate and sensible skin, the symmetrical proportion of parts, the indefatigable brain, the defenselessness, except by mind, the exquisite nervousness, tone, and arrangement of the whole body, place man far above and apart from all animals. But what would all these endowments and ad-

vantages avail without the harmonizing intelligence that uses them?

There is nothing so superior in man's sensations as that by them he, of course, becomes rational. Sense is not reason. Brutes are in some respects more sensitively endowed than man. But what do they infer? They can not perceive a moral truth. And alas! man without moral and religious intelligence sinks down to nearly the same level. Are not the habits of the lowest tribes of abandoned humanity almost brutal? When furthest removed from the knowledge of doctrines taught among the patriarchs, and handed down in unmeaning fragments by tradition, but preserved in full efficiency in the Bible, man wanders so completely an outcast from his paradise as to forget that he has lost and may regain it. But when he is enlightened by truth to consider himself and his condition, he scans the wonders of divine contrivance, at once acknowledges Omnipotence, and learning from his own consciousness, when thus instructed, that the fountain of power is the source of love, he owns the claims of his Creator, and calls him God and Father, because he feels there is no greater good, no higher, no dearer parent. Hence, too, spring up, as from the soil of Eden, the sentiments and the affections, the holier ties of kindred, society, worship—the Creator thus binding man to man by the very cords by which He unites humanity to Himself, and causes us to feel that in the sublimest sense religion is relationship. Nothing of this could man learn from his body. But the notion that the mind is a *tabula rasa*—a blank page on which Time may write the history of sensations—requires us to believe that every idea is the mere image of an exterior object. It is not so. The image of every object is colored by an inner light, and absolutely created by the mind as the representative of outward reality, so that nature awakens a correspond

ing world within the soul, not merely as the reflection of things visible, audible, tangible, but as living thoughts, begotten by the immediate act of Creative Power, and subject to laws of multiplication and affinity as distinct and imperative as those of material existence, and thus by memory, reflection, imagination, reason, indicating the vastness of man's destiny and dominion.

Different beings have different ideas of the same objects, although they are seen with the same kind of sight. The power of association modifies the perception, and a man of knowledge and thought looks upon a star with a mind far otherwise affected than he who sees it merely as a point of light. It is true that even mathematical axioms, such as *the whole is greater than a part*, may be fixed in our minds by the help of our sight, but yet it is the mind itself that makes the comparison by which we know the fact. Logic is not altogether founded on the properties of matter; for we do not infer cause and effect, perceive order and reason from analogy, merely in consequence of such and such material qualities, but we draw conclusions, which objects can not intimate except to a soul intuitively endowed with the faculty of understanding, in a measure, what is invisible from what is seen. What object can give us an idea of Deity? None; and yet we can not reflect upon the nature and design of the simplest thing about us without coming to the conclusion that it was produced by a power that *willed* its existence; and in this thought we have an inspiration which leads us on, as we contemplate it, to the inevitable conviction that there is an absolutely perfect and self-existent being who thus teaches us to trust Him by teaching us to think of His might.

Beside the authority and control which man is called to exercise over things which perish, he is required to reign as a king over thoughts which are eternal; and

while he learns the purposes and the workings of Holy Might within him, and around him in the world of matter and the world of mind, he finds himself the manifested representative of God over both. Therefore he turns his eye instinctively in adoration toward the limitless heaven, and while admiring the marvelousness of all the Omnipotent's workmanship, he triumphs with an awful joy in contemplating the fearful wonders of his own framework, and his more stupendous spirit, for thus he discovers how he stands at the summit of creation in immediate contact with his Maker, as if the Mediator and High Priest that enters within the holy place, and learns, in earthly symbols, the meaning of things heavenly.

But the highest form of perception in man is conscience; and yet this seems to be merely a sense of approval or disapproval, according to the standard we erect by which to estimate notions of moral excellence and personal advantage. Many persons from whose education and habits greater clearness of mind might be expected, speak of conscience as if all they conceived of it was that it stood in the relation of a better kind of soul attached to common sense for the purpose of correcting it. To such persons the scriptural terms, good conscience and bad conscience, must be perplexing. We see that this moral consciousness or conscience will be good or bad, just as we choose our standard of self-measurement. The man whose motives are no higher than himself, or who does not acknowledge and obey any authority above his own impulses, is at the worst, as regards conscience; but he who, like a true Christian, regards Perfection himself as the model for his own imitation, resigns mere self to the attractions of divine beauty, and thus seeks to have a conscience void of offense both toward God and toward man. In proportion as a man partakes of this mind, will be his mora

sensitiveness. Self, however, is sublimated, not lost. That is esteemed good by us which would be beneficial or productive of mental pleasure to ourselves: and that evil which would produce pain: hence the whole law of morality is summed up in one sentence: "Love thy neighbor as thyself." Thus individualism is the basis of society. But our consciousness is the rule by which to judge of others, and we enjoy fellowship because we can sympathize. In proportion as we become feelingly acquainted with the purposes of God in our existence, will be our estimate of our individual and collective dignity; and knowing our constitution as human beings, possessing even in our bodies, the credentials of our birthright to majesty and dominion, we can feel with others, and practically exhibit the propriety of the precept—"Honor all men."

The soul, then, is not made to seek its rest and satisfaction in tangible existence; for our consciousness proves to us, with sufficient force, that there are most mighty truths with the revelation of which to our apprehension the senses have nothing to do, but as instruments, which can no more form our judgments or sytems of reasoning than Newton's telescope could form his *principia*. The senses serve only to indicate external things, in a manner which reason must interpret according to laws of her own, so as to form a system of faith for her guidance in the hope and pursuit of felicity. Our characters are not determined by the fineness of our senses, but by the state of our wills in relation to God; and our wills are not rectified by sensation, but by conscience—the power within us by which we discern between good and evil when properly set before us. This power once ruled like a sun amid the system of man's faculties, constraining them to move aright, each harmoniously in its own orbit, deriving light, beauty, and order from the central source. But

some disturbing force has interfered with the harmony of our being. Man does not yield to the attractions of heaven, and he wills not to move by rule, but rather according to the impulses that may arise in his intricate and endless wanderings. How, then, shall we be taught? The will that is not governed by intuition, or by direct intelligence from the Divine Mind, can be informed only by experience of the actual difference between good and evil, through suffering the palpable results of evil in bodily disorder. And probably nothing could more perfectly exhibit the might that extends to minutiæ—the gentleness of Omnipotence arranging atoms—than the delicacy and vigilance of the love that, in the suggestive experiences of a perishing body, manifestly superintends our training for immortality. Nevertheless, many minds altogether disregard the power that is at work within them. Some seem to pass away as ignorant at their exit from this breathing life as at their entrance into it, as if their existence here were only for the sake of others, or as the trials of minds but partially awake. Some acquire just knowledge enough to fall in love with their own bodies, and so the thought of leaving them is death. Some possess a refined discernment of all that is beautiful in form, exquisite in design, and wonderful in construction, and by studying these, they acquire a classical taste, while their standard reaches scarcely to the height of human excellence, since they look not beyond the grosser elements that might combine to please their fancies and form the doubtful Elysium which they wish to be eternal. But others are of a sturdier, and yet of a more spiritual order. These are men not merely of sense and sentiments, but of heart and soul, with affections and faculties all devoutly, and therefore benevolently and wisely active, according to the knowledge which they rejoice to own as proceeding from him who formed them for Himself. With such we desire to be qualified

to associate. But this, we repeat, can not be without the influence of those lofty motives which sustain the mind in its endeavors to hold dominion over the body, and keep its appetites in subjection, so that they may serve their appointed purpose in enabling us to sympathize with each other, and in teaching us humility by proving our frailty and dependence. If our success in aiming to secure the advantages of intellectual and moral cultivation did not mainly depend on our management of the body, we might be excused from all concern about its well-being. But the activity and health of the soul itself require that we should not only enjoy a healthy body, but that it should be habitually controlled by reasonable thought, and thus be rendered the medium and instrument, not only of sensation, but also of demonstrating the power of a divine life; for, according to the direction of desire, we make the body the means of groveling below the brute, or else of attaining a moral mastery, and thus of securing those triumphs which the angels may admire. We shall discover, as we proceed, that this adaptation of the body to answer the demands of reason is, in a great measure, an acquired fitness. It is produced by the efforts made by the mind to accomplish its own wishes, and hence it will be more or less complete, according to the manner in which the mental and moral powers are called into exercise by education and social sympathy. The soul and body are so united and so constituted that all our perceptions are associated with the actions and feelings of our fellow-beings, and therefore he who would attempt to impart intelligence without regard to sympathy, would but attempt to produce a mind without social motive—that is, to make his pupil inhuman. Every agency that acts upon our senses was evidently intended to operate in subservience to our personal associations; for we never receive either pain or pleasure without at once

thinking of some one whom we desire to know our feeling; therefore there is no joy, even in truth itself, without fellowship; and it is in vain to aim at governing the reason without appealing to the affections.

A more stupendous proof of creative benevolence is nowhere to be found than in the multitudinous enjoyments of living creatures, each endowed with distinct character, each attached to a prepared *habitat*, each exactly accommodated according to its tastes, and yet the vast myriads all enlivened by the same light, all breathing the same air. The properties peculiar to each plant are but adaptations to creatures that can enjoy them. The scent, the form, the color of every flower and every leaf, and probably also of the very particles of earth that may be scattered by the wind, and even the various sands washed by the boundless sea, are all in keeping with the senses, and the appetites, and the habits of different living beings. From the mammoth to the mite, from the iguanodon to the minutest animalcule, the hand of the Almighty has equally provided for every want. That order of the elements which has been most productive of life has been that which has been most productive of the means of maintaining life delightfully; for though a malediction has visibly been written on the soil of earth, yet even now the goodness which at first overflowed from the Maker of worlds as He contemplated his works, still appears so exuberant, that our ideas of Omnipotence must be enlarged and exalted by Himself before we can believe in the possibility of benevolence greater than is here demonstrated. There is, however, a higher order of means existing, and a higher still intimated as about to be for the benefit of man; for, as before observed, God has devised a world of grace and providence for the cultivation of the human intellect and the human heart. He affords us free scope for the development of all noble affections

and faculties, and places impediments only in the way of evil. *He teaches* us by whatever presents itself to our senses, and thus we become conversant with all the marvelous properties of material agents, and acquire familiarity with the thoughts and feelings of our fellow-creatures and of Heaven. Thus all that belongs to sociality and conscience is elicited and exercised so as to direct the present and indicate the future. The Maker of mind and beauty has fashioned our eyes for the light, and tempered his glory to our vision; and He also has endowed our spirits with capacity to admire and enjoy. Every sense has its appropriate delight, and even the commonest necessities of the body are, in a healthy state, associated with pleasure, either in the direct gratification of appetite, or in the business of preparation to supply it; for every proper desire has a proper object, and every effort a corresponding hope. The blight upon our being is, indeed, too often evident, because man is still regardless of the laws of nature and of God; but yet the Almighty accommodates and serves his creature, for he mercifully removes the curse of barrenness and briers by conferring on industry the power of scattering flowers and fruits around her path; and even where the curse seemed rooted in the ground, hope and diligence have dug it out, and abundance has there filled the reaper's bosom. Every kingdom of nature yields innumerable means of usefulness or ornament to man; and so benevolently has Providence arranged even the process of decay itself as to secure a constant supply of aliment to rising generations, and has caused the death of one to be the life of more, and the merciful destruction of a luxuriant world to furnish exhaustless stores for the anticipated wants, intellectual as well as physical, of those who shall inhabit another. The deluge but refreshed the earth, and earthquakes have but diversified it with beauty and productiveness. The epoch of appa-

rent ruin is the era of a new order, and thus as mankind are removed to other spheres, those who succeed them here find their higher necessities provided for; and the world they live in, amid all its changes, is always sufficiently convenient to their bodies, and properly adapted to their minds and moral natures. The exquisite adaptation of the world we dwell in to our spiritual constitution is best evinced by special examination of the agents which act upon our senses, and contribute either to the disturbance or to the maintenance of enjoyment. Without an organized body we should be unfit for our abode, because the elements around us are so adjusted to each other and to us that they may operate through the medium of our nerves. The wonderful mechanism by which we see, hear, taste, smell, and feel is but the benevolent accommodation of our Maker in order to teach us how to reason concerning His power and His goodness. Some philosophers set *their* bounds to Omnipotence, and regard Him as incapable of creating *spirits* that shall think and feel by virtue of divine operation, without the intervention of material organization. Surely He who formed the eye can see without it, and, if He will, can cause his creature to perceive as He pleases. The idea of an object is created as well as the object itself; and the Almightiness at work to form our ideas and thoughts in connection with matter could determine our consciousness without that connection. Even now perception depends not merely on sense but on that power which perceives through sense. Sensation is a change in the state, not of the body only, but also of that which is conscious in the body; and we know that it may become incapable for a time of perceiving through the body in consequence of its being intently occupied by thoughts. The relation of our minds to time is not the mere result of the connection between mind and matter, but the effect of creative purpose in willing us

thus to perceive the difference between action and rest, and the length of one action in comparison with another. There is wonderful beauty in the adaptation of our senses to the motions of matter. We are, indeed, attuned to the harmony of the universe. Whether we are made conscious of matter, or only of ideas, time is still an element of consciousness, for a sense of duration is essential to our mental action. It is manifest, therefore, that whether we think of objects remembered, or of objects present, we equally conceive of time, because our perceptions in both cases are successive—that is, one idea follows another in associated order. From dreaming and meditating it appears, however, that we possess faculties which produce ideas, and measure ther continuance by a very different standard from that of sense, for we find ideas presented to our minds with sufficient distinctness, and yet with such rapidity, that we imagine in a minute the history of an age. As, then, while the soul is associated with the body, it is capable of condensing actions, and yet preserving a due notion of time irrespective of the body, why should philosophers conclude that a continual connection with corporeity is essential to thinking in relation to time, or with the consciousness of comparing idea with idea successively? There is an order of mind, and there is an order of matter; so, also, there is a sense of time belonging to bodily existence, and a consciousness of duration belonging to the spirit. The former measures by the relative movements of material things, the latter measures only by thoughts. We will not however puzzle ourselves with speculations; it is enough for us to know that the Maker of mind is the Maker of matter also; and that whether in the body or out of the body, the thinking being continues to think according to the ordinances and intention of Him who can not err. Omnipotence operates always to give each one of us the consciousness of

our identity, and He at the same time accommodates us all with definite places in his universe, hereby assuring us that we can not do better than rejoice in His goodness and trust Him forever. We are not made to stand alone or to dwell in an unsettled limbo without laws, but to move, like worlds revolving on light, in orbits regulated by the hand of God. But physical laws, as regards ourselves, are altogether subservient to moral laws, and, while we feel the unchanging might that created and that governs matter we are taught by intuition and the spirit of our Creator within us, to rely on the love that appeals to our reason. He who formed us with wills and affections, presents us with appropriate motives and objects; and there is no purpose in nature, as regards us, but to inform our spirits that we are not left to move at random, or to revolve in physical attractions, "like moats that people the sunbeam," or like dust in the whirlwind: we are made to act with a conscience, and dark is the philosophy that would teach us to believe in power separate from love.

As the senses are the avenues through which we perceive objects, it is requisite that the mind should be more or less on the alert in order to reap advantage from them. Although the soul which animates and employs the body derives none of its fitness or capacity to correspond with others from the senses themselves, yet we have seen that without their assistance the soul must remain in this world but a torpid prisoner in darkness. As the faculties of some animals lie dormant, sealed up in seeming death by the touch of winter, so in certain diseases we see the human energies of life, action, and thought, as regards outward manifestation, congealed at the source—not a sense is awake, not a faculty responds to our call. The organization designed to establish intercourse with this objective world, becomes a barrier to perception; but as the genial light

and warmth of returning spring sets the vital power of the dormant animal more vigorously into action, one sense after another lets in impressions from objects around, and the creature realizes its relation to a world full of sights and sounds. The power of enjoyment and remembrance belongs to its consciousness; it recognizes its place, and finding all the properties of things adapted to its disposition, the very act of using its senses is its happiness, and it feels amid the sunshine and the flowers as glad as it can live. Thus is it also with man, when his spirit is brought into relation to his proper place, as a being of large sympathies, intense affections, and infinite expansiveness. And yet this glorious being hangs on a fiber: his knowledge, and happiness, and power, in *this* mansion of the Creator, is suspended on nerves, the fitness of which to favor mental operation depends on arrangements of inscrutable delicacy, and on invisible agencies ever present. Wondrous beyond conception is the might that creates and preserves the exquisite adaptations of the soul to the brain, the brain to the senses, the senses to the properties of things, in order to qualify our sensations to our inner nature, and to teach us by consciousness the facts of existence, and thus to inform our reason by an actual feeling of the wisdom of divine law.

The manner in which all the attributes of a healthy body comport with the demands of the soul, as regards earthly uses, indicates that man was originally constituted only for happiness. The senses harmonize together, and thus subserve the soul; but we can not conceal the fact that we feel defect and disappointment in the present order of things, which can not be accounted for but by acknowledging that the reasoning spirit is constituted with capacity for delights that the sunshine of this world does not ripen. When our minds have tasted but a drop from the celestial fountain of truth, we turn away from

mere sensualities; and were it not so, all men would sink down into an epicurean elysium, and make the vine-clad valleys of earth their substitutes for heaven. The very suitability of the senses to the appetites of the soul would confirm this tendency, and soon render the enjoyments of sense so habitual as to be alone desirable, if Providence did not mercifully interpose with pain to direct our hopes and aspirations to the true sources of bliss in the integrity of the spirit and its intercourse with heaven.

Every impression on sense produces a correspondent action on the brain, and thus rouses the soul to act according to the law of association—that is, according to innate propensity modified by experience. If the brain be healthy, and its proper connections be unbroken, we no sooner think, than those nerves are excited which belong to the organs that put us in relation to the objects of our thought and desire. Thus, when a man thinks of what he loves, his features assume an appropriate expression, and every fiber of his frame is animated by his imagination. One who loves music, and whose body is well prepared for activity—that is, a person of sanguine temperament—requires to be under the strongest restraints of education, to prevent his breaking out into a song or a dance when the sound, or even the memory of a lively measure strikes his mind. A person who thus yields to excitement is one who trusts to impulse for his enjoyment, whose habit is the reverse of reflective, who can scarcely endure orderly discourse, and who never reads for the purpose of furnishing his mind with facts, or fortifying his reason with true principles. This condition of mind is most dangerous, because organization will express and perpetuate thoughts, and emotion will at length become permanent, which is madness; therefore, any one who is conscious of a tendency toward this state should at once commence a new course of training. Converse with nature, reader; exert the

mind, with a worthy object always in view; seek association with steady thinkers; abstain from sensual indulgence: thus you will conquer your lower state of self, and find the body and all its senses happily subservient to the soul, which, regarding its dignity as heir to an infinite and perpetual inheritance, would then no longer sport with existence, but walk abroad under the everlasting firmament, rejoicing that light is everywhere, and expecting to be rendered worthy, because willing, to commune with Omnipotence as indeed a friend.

The habit of excitement is incompatible with mental and moral health; regularity, or an orderly succession of objects in the use of the senses according to their constitution in relation to time, is not more necessary for our intellectual advancement, than for the production and preservation of our happiness; because the laws of our physical existence and of our spiritual being are equally broken by undue stimulation. The movements of our minds require to be measured by those of the universe. The ordinances of heaven are those of our faculties; and therefore, if we, in ignorant willfulness or in perverse presumption, endeavor to excite too many chords at once, or allow impulses to crowd upon our nerves, discord must awaken within us, and both our faculties and our affections, our passions and our principles, become deranged, never again to be reduced to order, until He who spake the planets out of chaos shall call new harmony into existence. True obedience is never in a hurry, but confusion is akin to faithlessness. The designs of God are in perfect sequence, and in accordance with our moral and intellectual improvement. Let us, therefore, steadily use what we possess, and patiently wait for our perfection; eternity is before us, and the Infinite our guide.

Every organ of sense being in correspondence with a certain portion of brain, and every part of the brain

being in relation to the mind, it follows that every alteration in the state of the organs influences the operation of the mind, and every change in the action of the mind modifies also the state of the organs, as far as regards sensation. This reciprocal influence is most manifest in the organs of special sense. The power of ideas over sensation is an extremely interesting subject, on which we might advantageously enlarge; but in this place we must be satisfied with a reference to a few facts, illustrative of the direct action of the mind in producing impressions on the nerves. Thinking excites the senses; but the mind receives no distinct ideas from them unless directed to them. An object may be present before the eye; but if the thoughts are intently engaged about other things, there is no perception of the object. Some degree of attention is necessary to the formation of the most imperfect idea; for the senses are the instruments by which we search for objects according to predetermination and experience. Of course, as the senses are intended to intimate to us our relation to surrounding things, we are governed by circumstances; nevertheless, our consciousness of the past, and our eagerness in pursuit of thoughts frequently so far predominate, that we scarcely attend, in the slightest degree, to externals. Any sound, any sight, any movement, any stirring of the air may, indeed, disturb the student when endeavoring to fix his soul upon a subject, but if he be thoroughly in the midst of his meditation, it requires almost a violence to his senses to recall him to their use.

A state of brain which may illustrate this subject is sometimes brought on spontaneously by age. Thus Conolly relates the case of an old gentleman who, in fixing his eyes on a book, loses sight of it, and reads instead what is written in his memory, so that the book falling on the ground, he still reads on, while his eyes gaze only on his pocket-handkerchief Another old

gentleman declared himself to be dead, and felt rather scandalized to find the windows not closed. He begged that his absent friends might be informed that he went off easily, and requested one pinch more of his favorite snuff before he was finally screwed down.

When the mind is bent on any application which precludes the free use of the limbs and senses, the brain is apt to be inordinately engaged, the nervous energy becomes concentrated, and not being drawn off and exhausted in the natural manner through the muscles, the nerves themselves are likely to undergo structural and functional change. Sociality and active exercise, under moral restraints, are the safeguards both of the intellect and the heart. Probably the intense habits of thought and feeling engendered by the refinements of civilization are the more likely to produce maladies of the mind, in consequence of the restraints on expression and action which such a state of society also demands. Civilization will not be perfectly consistent with Christianity—that is, with the highest development of our faculties,—until our knowledge of the laws of nature and of Heaven is practically exhibited in obedience both to physiology and to revelation. The disregard of these, and the substitution of fashionable delusions for divine realities, of artifice for truth, probably cause the great frequency of madness among us. The statistics of crime and insanity warrant our concluding, that the causes which favor the one also promote the other. Reason, however, will have availed us but little, if her light has not enabled us to discern that the best estate of man is not attained by abstract studies and enlargement of intellect. We do not approach perfection by orderly obedience to those laws of animal existence, under which the body in all its parts is properly developed, but by employing them morally. The finest model may be the vilest man. Our senses may be as harmoniously exercised as if we dwelt

at home in the paradise of Eden, and yet the heart be like an untuned harp, yielding only discord to the touch that awakens it. There is still something wanting to the completion of human character beyond knowledge, and beauty, and strength; for we may surpass all around us in that talent which enables us to take advantage of circumstances for our own aggrandizement, and be universally admired for external excellences, and be even worshiped as heroes, and yet employ our power in a tyranny that shall degrade ourselves into fiends, and our subjects into idiots. Whatever may be the endowments of a man, *his nature* demands more than he can find *in nature* to fill him with ennobling motive, and preserve him from degenerating into a mere selfish, subtile slave. I say *his nature*, because he everywhere demonstrates by his conduct that he feels a sense of defect and deficiency. Whether he prowl the prairies of vast America, or the howling wilderness of Africa, still man apprehends a want of aid from above. He strives to propitiate the Great Spirit, he appends to his person some charmed token of imagined protection, he hears God in the thunder, he sees the flashings of his glittering spear in the lightning, he adores the clouds, and watches for wonders wherever he looks, and always lives in fear, because he has offended. His love and his hate are equally fierce, and all, but his own small tribe, that cling together from necessity like a pack of wolves, are his deadly foes. *His nature* wants something to set it right, and what *that* is the child's story of Africaner suffices to show us. This man was once the savage Napoleon and desolator of Southern Africa; but he had heard of the good-will of God to man, and among his last words were these: "Live peaceably, and love God."

Man, when left to himself, becomes the mere vagabond of creation. But extremes meet. The fanatic, whose whole being is kindled with enthusiasm by a spark

of truth, instead of having all his faculties pervaded with her light, is but little wiser in his outrageous worship than the savage who obscenely dances his adorations to his hideous idols. His passions are more mighty than his reason. But it is only when reason has acquired motive to look beyond outward sight, and is enabled to infer a brighter futurity, that the present world becomes fully significant, and the awakened spirit begins to obtain glimpses of the paradise from which man fell when he found himself naked and ashamed. Light from heaven must bring the day-dawn to the cloudy horizon of earth, and sun-bright truth must beam upon the world within man, before the outward works of God will appear in the perfection of beauty. *Use* the world, is the doctrine of purity; for the physical framework and the moral constitution of man are so far in keeping with the outward *cosmos*, that it is vain to attempt to regulate our faculties and feelings without respect to the ordinances of God in the material creation. The powers that govern us are all ordained by Him, and if we really understood our position, and our calling as bearers of the cross, whose sole business is obedience to a higher, holier will than our own, we should yield ourselves and conquer. The informed soul looks onward forever to still higher regions of enjoyment and of light, for which each of us will be qualified just in proportion as each obeys the injunction—let all things be done decently and in order. Beauty is obedience, the visible expression of divine law, the reflection of creative love, which can only be seen in order and in loveliness.

The end of our argument is then simply to show that clearness and extent of intellect depend on the power of the soul to attend to sensation, and to direct muscular action; and hence, that moral character will be entirely determined by the habit of association with other minds; for our motive for attending and acting is mainly derived

from our love of others; and as are our affections, so must be our will, therefore, it is above all things necessary that a man's true interests, as a spiritual being, should always be clearly present to his mind, since he will otherwise think and act just as his sensual nature may at the moment dictate.

CHAPTER IX.

LIGHT IN RELATION TO LIFE.

Since heat, electricity, magnetism, light, and the nervous energy are proved to be intimately related to each other, we need no longer wonder that the sun should appear to be the fountain of all animation to this earth. The consideration of the effects of light on the human being involves also that of the influences which light seems to call into action; the chief of which, as regards its manifest operation on vital development, is *caloric*, or that which causes the sensation of heat. The Almighty regulates all nature by the combination of opposing forces; and as attraction gives origin to form and density, so heat, acting as the divellent force, imparts to bodies a tendency to expand. It is, therefore, essential to fluidity and motion, which sufficiently demonstrates its importance in every thing appertaining to life.

From the icy home of the Esquimaux to that of the savage that burrows in the sands of Sahara, we find man everywhere exhibiting habits and characteristics in a great degree derived from the peculiarities of his position with regard to warmth. Man, however, does not thrive simply as an animal. His physical frame may grow to perfection amid the general luxuriance of vegetable and animal life in a burning clime, provided water bursts from the rock, or distills from heaven; but still he is intellectually a dwarf, unless intelligence combine with his necessities to enlarge his thoughts, and stimulate his exertions. Where the very sun which en

lightens him at the same time excites his blood with a fervency that unfits him for tranquil reflection, and exalts his passions, while depressing the springs of mental vigor, of course the tide of natural tendency must ever be toward vice and degradation, not because vice springs from sunshine, but because the human heart inherits evil dispositions, and, therefore, unless restrained by religious conviction, always, and as a matter of course, takes advantage of every opportunity to indulge its selfish license.

Knowing the nature of our dependence on the state of the brain and of the blood, we might determine the locality most favorable to mental and moral development; and no one could doubt the probability of finding, what we find, in fact, that in the temperate zone man would appear in the highest state of intellectual cultivation. But concerning the effects of climate on mental action, we need not now expatiate; it is evident that the progress of the human race from its origin in Eden has been influenced almost as much by climate as by knowledge. We can exemplify the effects of climate in some measure by our experience of seasons. Who has not felt the tone of his soul in sympathy with the changes on the face of nature, and modified by degrees of temperature? As in warm climates, passion and imagination are apt to be exalted at the expense of the deliberative faculties, so we feel the enthusiasms of fancy most energetically during summer. When the bloom and verdure of rural scenes are at their height, and the leaves and flowers tremble with life responsive to the light that dances in the dew-drops which begem their edges, and the passionate songs of birds burst from the green vistas of the grove in a flood of joy, and all nature seems bathed in satisfying brilliance, how can we but feel a genial influence pervade our every fiber? No dream of bliss then appears extravagant. The vivacity and coloring of East-

ern tales, and the romances of uncalculating love, seem not then so perfectly unreasonable. The philosophy of physics looks as mean and meager as a skeleton articulated with wires, while we enjoy the animation of a spirit for which materialism can not account, and which the coldest theorists can not conquer. Yet probably Milton's picture of paradise is but a summer rhapsody, and our highest ideas of an imagined heaven are due to the delights we have experienced from visible beauty, under the glowing and glorious influences of that universal Apollo, the sun, the only perceptible source of the *dry splendor* to which the lugubrious Heraclitus thought he could trace all the powers of the mind. We, however, know better. We trace our energies to a source above the solar system, and feel our sufficiency to exist only in our connection with the Father of lights and of spirits, who is pleased to minister by so many means to our spiritual progress through the medium of material forms. Our souls spring not from dust, but are produced on earth from a higher sphere, the ordinances of which still cling to their being, though commonly lost to our perception amid the impressions crowding on our senses.

Although Ptolemy and Posidonius declare the south to be best calculated for the study of divine subjects, and Plato, Hippocrates, and Galen say that cold humidity produces stolid souls, nevertheless, all we learn from facts, as to sunshine engendering genius, or of gloom begetting stupidity and forgetfulness, is simply this—the mind really triumphs over all disadvantages, and man, when inspired by motives derived from a knowledge of his eternal destiny, his Maker's interest in his being, equally evinces the loftiness and grandeur of his endowments in every quarter of the habitable globe. Whether in the frozen regions, or in the heart of Africa, the cultivated mind still exhibits its power to devise and to dis-

cover. Knowledge and faith, alike experimental, and alike working by love, subdue all the kingdoms of this world, and the people that possess the highest moral motives must, therefore, ultimately predominate in every clime. Intellect must reign, and that because true religion is its living soul and quickening spirit. It can not yield to error; it can not sink at the sight of difficulty, but must gain fresh energy from every opposition, for its business is to conquer all enemies, and to confer a resistless life on industry and science.

Those who are accustomed to consider disease, detect many tendencies which others overlook. Physicians know there are critical years, days, and hours belonging to every body; certain periods in which susceptibility is increased or altered. There is a mysterious law of nature indicative of powers in action beyond the ken of science. A sort of sympathy exists between the body and the globe we dwell on, giving a tendency to the recurrence of certain states at certain intervals, and so controlling, by time and measure, the influences which operate upon us, that many of the events which most nearly concern us may be calculated with arithmetical precision.

The paroxysm of a daily ague comes on when the rate of our breathing is lowest, and that of alternate days when our breathing is at the highest, for according to the degrees of light and heat, we consume different quantities of oxygen, and as the alternations of rest and action are regulated by the sun, so our nervous systems, according to their state, are subjected to periodic alterations. Then again, it is observed, that there is a correspondence between the variations of the magnetic needle and the daily condition of function. The variations in temperature, too, and of the barometer, have certain regular periods which affect both body and mind, and there is reason to believe that all these influences ex-

tend through all animated beings according to a certain order in relation to number. The ratio of all these influences may probably be measured by degrees of light; and as this agency most distinctly stimulates our faculties while revealing to our sight almost every object concerning which we reason, it will be proper for us to reflect a little more fully on the relation which it bears to our well-being.

Action, life, feeling, thought, are all associated with light. Ere it flew forth like a pervading spirit, obedient to the word of God, this earth was unadorned, unfurnished, lifeless; but wherever light has penetrated, there also beauty and order, will and mind, are manifested through all the variety of appropriate organizations. The Promethean torch has quickened the cold marble; but man, without the continued emanation from a purer world, would yet find his icy tomb in this, hopeless of a resurrection. The link with heaven is unbroken: light still binds all worlds together, and its magnetic might reaches and rules the granite framework of our earth, awakening harmony more mysterious than that of Memnon's statue. Every color and every shape of visible creation discourses to man's spirit of an embracing, informing, vivifying Power, which can only be shadowed forth by the sun, and of whose nature and benevolence light is but as the written name.

We possess proof of the astounding fact, that solar light causes a regular succession of movements in the medium through which it passes, to the amount of five hundred millions of millions in a second; and it is because this vibration acts upon something in our brain capable of vibrating in a corresponding ratio, that our souls are put in such relation to light that we can enjoy vision. The time of different colors, however, is not the same; our sense of sight is affected by red four hundred and fifty-eight millions of millions of times in a second;

by violet, seven hundred and twenty-seven millions of times; and by yellow, five hundred and forty-two millions of millions of times in a second. Of course, therefore, different colors differently affect our souls. Throughout nature, these undulations of light are so modified as to be productive of a vast variety of enjoyments to various creatures, and to operate in such a manner upon their nerves and faculties as to guide them to the fulfillment of those desires which color and shape contribute to excite.

All happiness, derived through the senses of sight and sound, is dependent on the vibrations of light and air, which are so attuned by the touch of Deity as to suit the diversified powers of perception possessed by the beings upon earth, so that not a ray of light shall fall upon a cloud or on a flower, nor a sound, nor, indeed, a feeling or a scent be elicited, but it shall indicate the hand of Omnipotence at work to regulate vibrations in keeping with the senses of his innumerable creatures. How unutterably delicate the might that thus harmonizes human existence!

These facts are referred to, merely to show how stupendous are those refinements and subtilties of matter with which the soul is associated, and to indicate how inconceivably diminutive are the causes of delight and of disorder. How unwise, then, is our wonder at not being able to discover more of our spiritual nature, since even its material vehicle and instruments are so incomprehensible! Surely, all the truths which reach our reason are intended to convince us that our being is constantly the care of Almighty Wisdom and Benevolence; and as surely, therefore, it is our proper business to observe the laws under which we live, and to obey them, in confiding and adoring submissiveness to the love that has imposed them.

Many interesting facts might be adduced to demon-

strate the importance of our considering the direct operation of color, merely as such, upon the mental faculties. No doubt a large measure of our pleasure from color is due to association and the sense of the agreeable, for it seems quite natural to connect color with sentiment; hence every thoughtful mind can appreciate the poet's truthfulness in speaking of the "green and yellow melancholy," and of "celestial rosy red," as "love's proper hue." Irrespective, however, of the influence of what we are accustomed to call the cheerfulness of particular colors — perhaps simply because a degree of brightness is always pleasing to the healthy brain—there is reason to believe that colors will be agreeable or disagreeable, not only according to the general state of the affections and of intellectual idiosyncracy, but also according to their power of modifying the magnetism of the body. It has been demonstrated that different rays have different chemical and magnetic effects, and therefore we may fairly infer that their respective operations on the nervous system must also differ. It is a pity that their influence on morbid manifestations of the mind has not been more studied, since several circumstances favor the conclusion that the mental condition is greatly modified by color; thus we find that red often violently excited those morbid beings who were subject to the dancing-mania, and that particular colors are apt to arouse the indignation of all maniacs. We observe, in this respect, a remarkable coincidence between mad persons and the state of infuriated animals, which are also rendered more outrageous by glaring colors, especially red. The taste for various hues was not less remarkable among the dancing devotees of St. Vitus than was their mad delight in music; but the excitable Italians, in their tarantali, experienced very different sensations from the phlegmatic Germans in their epidemic dance. The latter detested red, the former

delighted in it. Their likings varied according to temperament and nervous condition. Some preferred yellow, others black, while others again were so enraptured by green or blue as to throw themselves into the sea, or into rivers, in the delirious ecstasy of their enjoyment. Indeed, eye-witnesses describe this chromatic rage as altogether beyond their powers of expression. The patients rushed toward their favorite color, devoured it with eager looks, kissed it, caressed it in every possible way, embraced the colored article with the intense ardor of lovers, while the tears streamed from their eyes and rapturous language flowed from their lips; in short, to use the words of Hecker, "they were completely overwhelmed by the inebriating impression on their senses."

There can be little doubt that in these cases the imponderable principle which is connected with sensibility, and which certainly has a marked relation to magnetism, was so altered, either by the mere action of the mind, or by some peculiar distemperment, as to be disturbed in an extraordinary manner by such things as in general scarcely excite the sensorium. Probably a state of nervous system, not dissimilar, although more manageable, may obtain in those individuals who are remarkable for odd fancies as regards color: thus Dr. Johnson was unhappy in his studies except in a room with yellow curtains and walls, while the author of the "Night Thoughts" delighted in crimson, and Goldsmith luxuri ated in plum color.

The experiments of Baron von Reichenbach throw a new light on this subject, since it appears from these, that the different colors exert decidedly different effects on the nervous state of a susceptible person. A spectrum was thrown on a wall, and the subject of experiment placed in a dark room, holding a copper wire, fifteen feet long, in her hand, the other end of which was moved

from tint to tint along the spectrum without her knowing what was done. Many experiments, which gave uniform results, showed that green and yellow especially excited "the delightful sunny feeling of refreshing coolness." The red produced a sense of heat—the violet ray and a point beyond it caused a peculiarly disagreeable sensation. We can not but be struck with the circumstance that the maximum of light, the maximum of heat, and the maximum of magnetic power in the spectrum have each their peculiar action in the excitable nervous system. We know that the effect of daylight on the mind vastly differs from that of any artificial light, probably from their respective constitutions as respects the proportions of color. The light of a common lamp is just the reverse of sunlight, the former being—red, eight; yellow, five; blue, three: and the latter—red, five; yellow, three; blue, eight. I know a sensitive person in whom the light of a lamp produces pain in the back of the head, although the brightest sunshine excites no such effect. The remarkable influence of moonlight may probably be traced to some peculiarity in its composition. Its magnetic effects certainly differ much from those of direct sunlight, and hence probably it promotes coldness and putrescence, and, of course, it may also excite peculiar changes in the nervous power, thus accounting for its well known influence on lunatics and on nervous individuals.

The phosphorescence so frequently seen at sea has also a strange effect on the nerves. A competent observer, who had extensive opportunities of witnessing its sublime and beautiful appearance, states that he could read by this light, but that the attempt almost always produced headache and sickness.

These facts indicate the propriety of considering the influence of light on the body in health and disease; for undoubtedly much remains to be discovered concern-

ing its agency, in connection with life and nervation, which will aid society in the pursuit of wisdom and happiness.

We happily possess the power of modifying light as regards the color diffused in our apartments, by an appropriately colored medium through which it may pass; and all who can should consider the subject, not only in relation to the preservation of sight, but also to tranquillity of mind, for both morals and intellect are determined in a great measure by the relation of our nerves to light, and the character of our enjoyments in regard to color. This observation may appear to some readers as rather too refined, but its meaning will be brought home to their understandings when they reflect on the influence of light, on physical development, and in modifying disease. A tadpole confined in darkness would never become a frog, and an infant, being deprived of heaven's free light, will only grow into a shapeless idiot, instead of a beauteous and reasonable human being. Hence, in the deep damp gorges and ravines of the Swiss Valais, where the direct sunshine scarcely reaches, the hideous prevalence of cretinism startles the traveler. It is a strange, melancholy idiocy. Many cretins are incapable of any articulate speech; some are deaf, some blind, some labor under all these privations, and all are misshapen in almost every part of the body.

I believe there is, in all places, a marked difference in the healthiness of houses, according to their aspect with regard to the sun, and that those are decidedly the healthiest, *cæteris paribus*, in which all the rooms are, during some part of the day, fully exposed to the direct light. It is a well known fact, that epidemics frequently attack the inhabitants of the shady side of a street, and totally exempt those of the other side; and even in endemics, such as ague, the morbid influence is often thus partial in its action. Sunshine is also essential to the

perfection of vegetation, and the water that lies in darkness is hard, and comparatively unfit for drink; while the stream that bears its bosom to the day, deposits its mineral ingredients, and becomes the most suitable solvent of our food. In small-pox, and other eruptive diseases, the tendency to form pustules is diminished by the patients being kept in darkness.

But the influence of light on the nervous system can not be more forcibly exhibited than in its effects on that terrific disease, hydrophobia. While light is excluded, the patient can sometimes swallow with comparative facility, and as long as no bright object is presented all the spasmodic phenomena of the malady are more easily controlled. It is curious that bright objects also frequently threw the votaries of St. Vitus into convulsions. There must exist in all such disorders an exalted irritability, a degree of which is perhaps also experienced by the inordinate student, when, like Milton, he exclaims,

"Hide me from day's garish eye."

This intolerance of light seems generally to arise from irritation of the brain, induced by excessive use of the eye; more especially from any such employment as demands a nice discrimination of sight, and at the same time a powerful effort of mind. It is important, therefore, for all persons so engaged, to take due precautions to avoid cerebral excitement, and by all means to relieve the eye when fatigued. Rest is the natural remedy. Those who pore over books should either have the power of qualifying the degree and color of the light admitted to their study, or else use tinted glasses, taking care, however, not constantly to wear them of the same color. Gray, blue, and green, are the most suitable shades, but of course the choice should depend on circumstances, such as the effect on the sight, and the color of the objects chiefly before the eye. Whatever is disagreeable in this respect is always more or less injurious.

The following passage, in which philosophy is felt to be one with poetry, will aptly introduce us to another chapter:

But let my *due* feet never fail
To walk the studious cloister's pale,
And love the high-embowed roof,
With antique pillars massy proof,
And storied windows richly dight,
Casting a dim religious light:
There let the pealing organ blow
To the full-voiced choir below,
In service high and anthems clear,
As may with sweetness, through mine ear,
Dissolve me into ecstasies,
And bring all heaven before mine eyes.

MILTON

CHAPTER X.

THE INFLUENCE OF MODULATED SOUND.

The transition from light to music is natural and easy; the relations between them are striking. This truth may be demonstrated by a simple experiment. If we press the finger on the eye, luminous appearances are excited, which present a remarkable analogy to the figures produced by sonorous vibrations. When a plate of glass covered with water is struck with the bow of a violin, the water not only divides into vibrating segments and parts which remain at rest, but the water on the vibrating parts of the glass presents a most regular distribution into rhombic figures and stationary waves, and the figures excited in the eye call to mind the appearance of decussating waves. (Muller.) I find that powerful sonorous vibrations cause undulations of light before my retina. It appears also that certain states of the optic nerve may produce impressions of sound; thus Milton writes, that "on the gradual failure of his power of vision, colors proportionately dim and faint seemed to rush out with a degree of vehemence and a kind of noise."

It is observed that those individuals who are unable accurately to distinguish colors are also usually defective in the power of discriminating musical notes. From these circumstances we may infer that there is some medium common to the senses which is influenced when either of them is excited, and that it is connected with the whole sensorium in such a manner, that impression on any part arouses the whole. Hence we account

for the awakening of all the nervous system, as from healthy sleep, when any division of that system is disturbed, and thus we explain the sympathies peculiar to it. The senses all mutually affect each other, and the use of either of them almost invariably suggests to the mind certain objects which belong to the others also. Thus we can understand how it happens that undue indulgence in any sensuality captivates and enchains the whole being, and renders a man a bond-slave to the adopted habits of his own body. The completion of his mental and moral character is determined by his prominent physical enjoyments, toward the gratification of which all his pursuits will necessarily tend; and the soul that knows no superior delights can never be weaned from those of the flesh; so that he may well be described as incapable of freedom, and as if led by evil spirits at their will.

The effect of music on the lower creatures is often very striking, as it seems to operate upon them by awakening uncontrollable instincts and sympathies, and thus demonstrates that it acts upon the nervous system with vast power, although it give rise to no sentimental associations. Sir W. Jones testifies to the credibility of the story, that while a lutenist was playing before a large company in a grove near Schiraz, the nightingales vied with the musician until they dropped on the ground in a kind of ecstasy, from which they were roused by a change in the music. An officer confined in the Bastile found himself surrounded by hundreds of musical amateurs, in the forms of mice and spiders, whenever he played on his lute.

The charming of serpents by music is proverbial, and in the East persons are employed to rid houses of venomous snakes, by causing them to come out of their holes at the sound of a flute. The negroes catch lizards by whistling a tune to attract them.

Doubtless some creatures are endowed with a power of discerning and enjoying sounds which are altogether unheard by others, and it is suggested that some may be impressed even by the different vibrations of light, so as to enjoy them as we do music. In short, all animated beings are, according to their conformation, influenced more or less by sonorous vibrations. Hence the diversified language of nature, and the felt significance of all her innumerable voices. There is something intensely beautiful in the fact, that all creation is alive to the expression of feeling; for thus is indicated some deeper mystery of relationship between all sentient beings. It seems to say that the Creator has fashioned all his creatures with regard to sympathy, and that each in his degree is interested in some ulterior purpose of Omnipotence.

The effect of music on the human mind is influenced by association and memory. Delicacy of perception, a kind of intuitive appreciation of tones and vocal expression, distinguish those who are gifted with musical genius, and they are liable to be possessed by the spirit of harmony to such a degree as to be entranced in a rapturous delirium more dreamy than the visions of an opium-eater. This rapture is a kind of abstraction, which those only know whose hearts are exquisitely sensitive, whose affections have been tried in fire, whose intellect has been expanded and sublimed by sympathy with suffering, and whose spiritual faith has grown mighty in the struggle after satisfaction. They seem to listen until they hear voices uttering the language of a higher sphere; they catch the calm ecstasies of heaven; and they look abroad upon the universe, as if, like the sons of the morning, they saw a new creation evoked from darkness into the harmony of light by the breath of Deity. This intellectual delight in music is never felt but by those whose sensibility is of an order

to need such refined consolations. The divine benevolence is thus seen in qualifying those who are most susceptible of pain for the richest enjoyments which sense can afford. The vulgar delights of music are vastly inferior, and but as the responses of nerve to the vibrations of the air, without any but the lowest mental association. A singing bird in a cage is as spiritual as the majority of singers, and many a Hottentot, with a soul in tune, has more taste for the chaste and lovely than many a cultivated pianist.

There is some correspondence between musical notes and nervous action; hence music exerts a healthful and exhilarating influence on certain conditions of the body, more especially those in which the manifestations of the mind are deranged. In the Auxerre Asylum, many insane persons have been restored to reason by a right use of music; and it is stated in the reports of the Lancaster Lunatic Asylum, that music and dancing are very beneficial in securing quiet and natural repose. Of course, the music must be adapted to the case, and the sensibility of the nervous system. A man like Mozart, who even when a child would turn pale at the sound of a trumpet, and become almost convulsed at a harsh discord, could be soothed only by a music and a touch like his own.

There is every reason to believe that the effects of music are of a more palpable kind than is commonly imagined. Wo ought not to be laughed at if we refer to the authority of ancient writers on this subject; for we should remember that their conceit did not altogether obscure their power of observation, as is too often the case with some moderns. Democritus tells us that many diseases may be charmed away by the melody of a flute, and Asclepiades treated sciatica successfully with the obstreperous notes of a trumpet; and what is worthy of remark, he states that the malady

did not disappear unless the part trembled in sympathy with the sound. Now this observation is not ridiculous, since it is evident that any powerful vibration which may affect the brain through the ear will also influence the pulses of the nervous current as it passes into the muscle, and probably excite it to a newly measured action.

There can be no doubt that music alters the action of the mind's readiest instruments, and it must, therefore, modify the operation of the brain on all the body. We feel this, for as often as, with a free mind, we hear a lively air, it excites pleasurable emotions, and a disposition to dance. The luxury of music, however, may be indulged to excess, and, as it is manifestly capable of acting violently on the nervous system, an enthusiastic pursuit of it may easily disorder the brain; in fact, we find that mad musicians, by no means rare, are the maddest of the mad. They are, however, the more numerous in consequence of other habits ill suited to persons of nervous refinement.

The effect of music on the moral nature can scarcely be more fully expressed than in the words of good old Bishop Beveridge, who thus speaks of the influence of music on himself:—"It calls in my spirits, composes my thoughts, delights my ear, recreates my mind, and so not only fits me for after-business, but fills my heart at the present with pure and useful thoughts; so that when the music sounds the sweetest in my ears, truth commonly flows the clearest into my mind, and hence it is that I find my soul is become more harmonious by being accustomed so much to harmony." This fine-hearted Christian seems to have indulged his passion for music a little to excess; for he adds, "The least jarring sounds, either in notes or words, seem very harsh and unpleasant to me." This, of course, is naturally the consequence of a highly cultivated ear; but we know that inordinate enjoyment of any kind, either renders

the nervous system intolerant of common impressions, or otherwise produces an obscurity of perception. Abuse of the body always tends to insanity in some form; thus a man may disqualify himself for the society of earth by anticipating the harmonies of heaven, and agitate his soul with a perpetual discord by unsocially seeking to dwell in the soft raptures of Cecilia.

The power of music, however, seems to depend on its exciting the nervous energy in a remarkable manner, not merely as that energy is connected with the organ of hearing, but also as it pervades the whole body, and may be properly regarded as a more refined body in itself; in short, perhaps, the spiritual body in distinction from the physical. This principle, or *energia*, seems to be in close relation to music and light; for, undoubtedly, it is this which is moved by their respective vibrations. If, therefore, this principle, associated with life, adheres to the thinking being in its transit from the body at death, a sufficient medium and cause of perception will still exist, as regards both sound and sight. Thus light and music will still instruct and delight the hopeful spirit in its appropriate sphere.

Travelers inform us, that the Arabs are in the habit of teaching goats to stand with their feet close together on the top of several little blocks of wood. The manner in which they accomplish this feat beautifully illustrates the influence of modulated sound on the muscular system, as it appears that, however long the goats may have been used to this exhibition, they succeed only during the playing of a tune. If there be any alteration in the movement or time the goat begins instantly to totter, and the moment the music closes the goat falls. A similar effect is felt by dancers on the tight-rope, and no doubt a ball-room would be thrown into vast confusion if the music of the dance were suddenly changed; the step would be disordered, and every muscle em-

ployed would require an extra effort of will to prevent the whirling waltzers from dashing against each other or falling to the floor. Probably we may the better understand the influence of music in soothing the irritated brain by reflecting on this connection of the nerve-power with the voluntary muscles. Strong emotion and intense thought seem to concentrate the *vis nervosa* within the brain; but music, operating through the most intellectual of our senses, the ear, diverts the mind from its work, and thus allows the current of energy to revert to the muscles with redoubled power. Hence it happens that, after much mental application, we feel the pleasure of action the instant we turn our attention from mere thoughts. This is more especially the case if, at the moment, a brisk and enlivening measure should strike upon the ear.

There seems, indeed, to be an antagonism between muscular action and certain forms of mental disorder induced by moral causes, or by injudicious efforts of the will to accomplish more than the nervous system is well qualified to bear. Hence the various kinds of dancing-mania, which, in successive ages of the world, have puzzled physicians. These, although frequently excited into action by music, as in the case of the St. Vitus's dance, were nevertheless cured also by violent and long continued exertion in dancing. Felix Plater (1641) informs us that the magistrates hired musicians for the purpose of carrying the St. Vitus's dancers the more quickly through the attacks, and directed that athletic men should be sent among the people to complete the exhaustion of the patients by continuing the dance, as it was found that the mental disorder was thus most effectually relieved. The cure of that equally remarkable infatuation, tarantulism, was effected in a similar manner. But, with regard to this subject, it is well worthy of observation, that the rudest peasantry, and

those who were entirely ignorant of music, evinced an unusual degree of grace and elegance in dancing while under the peculiar excitement of this strange malady; for it appeared as if all the organs of motion were in a new condition, and completely under the control of the enraptured soul, which could obtain no ease but in music and dancing. Probably, on this principle, we may be able to account for the strange conduct of certain celebrated men, such as Bourdaloue, who was accustomed to allay the excitement of his mind after the composition of his eloquent sermons by very uncanonical behavior. His attendants were one day mightily scandalized and alarmed by hearing a very lively tune played on a fiddle in his room, while they waited without to accompany him to the cathedral. They peeped through the key-hole, and what was their consternation to behold the great divine dancing about in wild undress to the inspiration of his own music! Soon after he met them in a manner becoming his character; but observing signs of astonishment in the party, he explained that without his dance and his music he would have been incapable of his public duty.

Every individual has a mental world peculiarly his own, since each for himself interprets all the impressions of his senses according to the character and constitution of his mind. But habit modifies the manifestation of self, and imparts a new bias to the soul by bringing it under the dominion of sympathies and other associations. The truth of these observations can not be more strikingly demonstrated than in the effects of music upon different persons according to their temperament, which can scarcely be more powerfully expressed than by Sir T. Brown in the "Religio Medici:" "Even that tavern music, which makes one man merry, another mad, in me strikes a deep fit of devotion."

This passage I quote from the Opium-eater, who re-

fers to it in evidence of his opinion that we enjoy music by a reaction of the mind upon the notices of the ear, the sense receiving the *matter*, the mind giving the *form* of our pleasure. This writer presents a good instance in his own person of the combined influence of mental habit with remarkable excitation of the brain in modifying the enjoyment of music. He informs us that when fully possessed by the delirium arising from a large dose of opium, he was in the habit of going to the Opera, where the elaborate harmony displayed before him, as in a piece of arras-work, the whole of his past life, "not as if recalled by an act of memory, but as if present, and incarnated in the music; no longer painful to dwell upon, but the detail of its incidents removed or blended in some hazy abstraction, and its passions exalted, spiritualized, and sublimed."

The best music is that of the human voice, because it is intended to express the character of our emotions, and to awaken in others a consciousness of the affection which we feel. Every note of every instrument corresponds with some tone of utterance belonging to the language of human passion, and is therefore capable of rousing that part of our nervous system through which the feeling is naturally experienced and expressed. It strikes a chord in tune with the soul. I do not recollect any incident more beautifully elucidative of the fact, that modulated sounds thus stir up the whole being by passionate suggestions, than the statement so well presented by Holman, the blind traveler, concerning his feelings on hearing the opera of the "Barber of Seville," at Florence. He says, "I can not resist stating the extraordinary effect produced upon me by the singing of the *prima donna*. I thought I would have given the world to have seen her pretty face and figure. The tones and expressions of her voice appeared, however, to connect themselves in my mind by pure sympathy with ex

act delineations of her person and attitudes, and to excite the most powerful desire to possess the power of vision which I ever recollect to have experienced since I had the misfortune to lose it. I heard, I felt, I saw, or imagined I saw, every thing which words, actions, or gestures could convey. I rose, I leaned forward, and felt an almost irresistible impulse to spring upon the stage, to ascertain whether my ideas were illusive or real; and, what may be thought still stranger, my desire to see appeared to originate in a wish to convince myself that I could not see. I may be thought to overcharge this picture with too vivid or affected sentiment; but I can assure the reader that it contains only a small portion of the exquisite feelings which I experienced."

It is very probable that the effect was heightened by his imperfect knowledge of the language, as well as by his total blindness; for "the less you understand of a language, the more sensible you are to the melody of its sounds;" because, in fact, by listening to the sentiment expressed in words, we lose that of the mere music.

The universal disposition of human beings, from the cradle to the death-bed, to express their feelings in measured cadences of sound and action, proves that our bodies are constructed on musical principles, and that the harmonious working of their machinery depends on the movements of the several parts being *timed* to each other, and that the destruction of health, as regards both body and mind, may be well described as being put out of tune. Our intellectual and moral vigor would be better sustained if we more practically studied the propriety of keeping the soul in harmony, by regulating the movements of the body; for we should thus see and feel that every affection which is not connected with social enjoyments, is also destructive of individual comfort, and that whatever tends to harmonize, also tends to promote happiness and health. There is every probability that a general im-

provement in our taste for music would really improve our morals. We should indeed be more apt to detect discords, but then we should also be more ready to avoid their causes, and should not fail to perceive that those feelings which admit not of cheerful, chaste, and melodious expression, are at war with both soul and body. A wholesome musical education is perhaps a necessary part of high religious cultivation, and it will be far more valuable to children, than the catechistic familiarity with great truths, which, being committed to memory as a task, are, alas! too apt forever after to be associated with dark ideas, instead of directing the soul to the Maker of illuminated worlds.

But music may be either mawkish or manly; heavenly or infernal. All enjoyments are of use, but they demand a wise discretion to use them; for "delightful measures" may terminate in "dreadful marches;" and "the lascivious pleasings of the lute" may supersede the solemnities of the universe, and draw the soul in among the Sirens beyond recall.

The benevolence of our Creator is most beautifully manifested in the fact, that we are made to be moved by cadence, rhythm, and time. These, as well as intonation, express conditions of mind. The utterance of feeling naturally falls into syllabic arrangement as well as appropriate tone, in keeping with the state of the organization excited by the feelings. Thus, poetry is an imitative mode of presenting affections, so that he who either reads or writes, utters or listens, may equally feel the effect without being aware of the cause. A solemn state of feeling is unavoidably expressed in slow and majestic measure, the syllables succeeding each other with stately deliberation, as we witness in the majesty of Milton's language, when he discourses of things erst unattempted in prose or rhyme. But when the soul rejoices in its own lively conceptions, the syllables dance along in that quick hilarity which, in unrestrained society, would throw the

limbs into vigorous motion, and prompt the sanguine spirit to exclaim—

> "Come and trip it as you go
> On the light fantastic toe."

Thus the eloquent man, speaking right out from the fullness of his heart, stirs up the nerves of his hearers, not only by the annunciation of his thoughts, but also with the intonations of his voice; the feeling which measures and supplies his language, causes his words to flow rhythmatically forth in just that order which best conveys and communicates the passion which inspires him.

As in both sights and sounds there may be a want of harmony, amounting to a most painful sense of discord, so we find some persons so unnatural in their mode of expressing themselves, that we can only account for their oratorical distortions by supposing their entire physiology out of joint and unfit to be actuated by beautiful sentiments. Some preachers, instead of winning the souls of those who listen to them, by begetting a holy sympathy, may utter the greatest wisdom, and be filled with truthfulness and pathos to a sublime degree, but still produce only a feeling of their artifice, if not of their hypocrisy. Such orators, however, only labor under a mistake. They are *not apt* to teach, they are only apt to think themselves to be so. They feel earnestness, but perhaps not exactly when they try to show it. Many an honest enthusiast betrays the insobriety of his thoughts by his false emphasis, both of utterance and action. Such men may give vent to much truth of the highest order, but they feel it amiss, and, instead of its flowing like a living stream from a full fountain, it fitfully bubbles and bursts out, as if connected with some volcanic irregularity, instead of being fed by the dews of heaven. Such teachers produce disorderly hearers, a broken, noisy, coarse congregation, and a flock much disposed to wander

at its own rude will, with high notions and low feelings. Their speech betrays them, for a vulgar familiarity takes the place of Christian simplicity; and they dispute dogmatically, and engender strife, where the quietness of a wise faith would diffuse peace and charity. Their whole conduct and conversation is inharmonious, full of violent contrasts, which grate upon the moral sense as much as their untuned voices grate upon the ear. Their style is altogether like that of an ill composed book, which has but little to recommend it in the nature of its contents; and which, instead of being printed in good taste, is full of ignorant attempts, by outrageous pointing, dashes and stars, to enforce the attention of the reader, though he will find nothing in it worthy his study. In short, it is evident that discordant methods of speaking, acting, thinking, and writing, however apparently precise, are still unnatural, being the result neither of sane brains nor sound morals. Even the truth, when conveyed in an inappropriate manner, becomes distorted and disfigured, like a beautiful face in a bad mirror. Let it not, however, be imagined for a moment that wisdom speaks not always with a commanding voice. She possesses a might which often exhibits itself the more forcibly through the feebleness of the instrumentality she employs. Her most uncouth advocate acquires the force of the truth which he feels, and however bad a man's oratory may be, his simple enthusiasm, the spirit which inspires him, will cause his body and life to speak, not in words only, but also with communicable power. If, therefore, we would reap the best advantages of Providence, and fit ourselves to derive from society its noblest pleasures, we must be taught in the school of God, and exercise our endowments in a becoming manner, without affectation, without constraint, since we shall thus be qualified to impart, while we receive delight.

Oratory and music are closely related, and both are

more intimate with poetry than is commonly supposed, for words and ideas are all connected in some measure with time and intonation; and their ready association is due to that power which puts our muscles in motion, and so excites our nerves that we are conscious through them of successive impulses. All impressions on the body appear to be vibratory, and every idea seems to awaken in the very substance of the soul a note or chord peculiar to itself; hence the repetition of a by-gone sound arouses it again, as a current of the same force renews the exact vibrations in the Æolean harp while strung the same. The familiar voice calls into new life a thousand buried thoughts, and a word spoken by one whose tone was familiar to childhood, causes a vast vision of old scenes to spread out before the eye of age. With one who from blindness has been long accustomed to depend on the ear for more than its proper share of exercise in seeking enjoyment and intelligence, the memory of sounds is, of course, most remarkable. Dr. Kitto relates, that he accompanied his grandmother to her native place, where she had not been for thirty-six years. "She was speaking," he states, "to some persons on the green certainly before her name had transpired, when an old half-idiotic blind man, who sat in front of his cottage, startled them all by calling out in an eager voice, 'Is that C. M. that I hear?' mentioning a name which she had ceased to hear for thirty years." With that remembered voice no doubt many youthful associations returned in their freshness to the old man's soul, for into its paradise age never enters. How mightily such facts teach us our dependence on habit and society, and even on seemingly accidental sounds. The notes of the Marseilles hymn produced the same effect as its words, and the exiled Swiss, at the sound of that simple air, again saw before him those he loved, while he pined for his mountain home with a longing which destroyed him.

And thus, too, it is with the man familiar with holy truths; his associations carry him far away from the confused warfare of this world; the highest harmony belongs to another sphere, and in his estimation the best music of earth serves only to introduce us to that of heaven. Nor can there be a finer application of music than to assist the dying man to raise his thoughts to the home of harmony and light. I knew an excellent physician, who, having been infected through a wound while examining a body that died of a malignant disease, soon discovered such symptoms in himself as warned him that he must speedily pass away from earth. He, therefore, sent for a pious friend to sing and play the harp in the next room, until his spirit should be liberated. This was done; the darkness of death seemed not able to enter there; not a groan was heard, and the believer "fell asleep in Jesus," with the music of *that* name within his soul.

> O, may we soon again renew that song,
> And live in tune with heaven. MILTON.

CHAPTER XI.

MENTAL ACTION IN THE USE OF SIGHT.

The infant lying in the cradle, twisting its tiny fingers in the sunshine, and laughing as if the light were playing with them, seems to take hold on Heaven, thus revealed in the unity of love and light. The weak creature falls helpless on Almightiness, as upon the arms of the parent. How gently does He deal with it! By little and little the young immortal becomes aware that it has been using the universe as its plaything. The sun, the moon, and the stars, and all the wondrous objects of this world, are so gradually familiarized to the soul, that unless some deep words of divine truth be whispered into the ear, as from the heart of a praying mother, the child will know nothing of the Creator, but in its very passion for pleasure will adore creation, as all it can love, or from which it can hope to receive enjoyment and intelligence. Dr. Kitto, in his interesting and excellent volume on Deafness, quotes the following passage from a little book called, "La Corbeille de Fleurs," concerning the childhood of Massieu, the celebrated deaf-mute, who was instructed by Abbé Sicard. "In my childhood," says Massieu, "my father made me make my prayers in gestures, evening and morning. I threw myself on my knees, I joined my hands, and *moved my lips* in imitation of those who speak when they are praying to God. At present, I know there is a God, who is the creator of heaven and earth. In my childhood, I adored the heavens, not God. I did not see God, I did see the heavens." The following con-

versation is most interesting: "What were you thinking about while your father made you remain on your knees?" "About the heavens." "With what view did you address to it a prayer?" "To make it descend at night to the earth, in order that the plants which I had planted might grow, and that the sick might be restored to health." "Was it with ideas, words, or sentiments, that you composed your prayer?" "It was *the heart that* made it. I did not yet know either words or their meaning or value." "What did you feel in your heart?" "Joy, when I found that the plants and fruits grew. Grief, when I saw their injury by the hail, and that my parents still remained sick." At these last words of his answer, Massieu made many signs, which expressed anger and menaces. "The fact, as I have been informed," says the narrator, "was, that during his mother's illness, he used to go out every evening to pray to a particular star, that he had selected for its beauty, for her restoration; but finding that she got worse, he was enraged, and pelted stones at the star. 'Is it possible that you menaced the heavens?' said we, with astonishment. 'Yes.' 'But from what motive?' 'Because I thought that I could not get at it to beat it, and kill it, for causing all these disasters, and not curing my parents.' 'Had you no fear of irritating it?' 'I was not then acquainted with my good master, Sicard, and I was ignorant what this heaven was. It was not until a year after my education was commenced that I had any fear of being punished by it.' 'Did you give any figure or form to the heavens?' 'My father had made me look at a large statue which was in the church of my country. It represented an old man with a long beard; he held a globe in his hand. I thought he lived above the sun.' 'Did you know who made the ox, the horse, etc.?' 'No; but I was curious to see them spring up. Often I went to hide my-

self in the dykes, to watch the heaven descending upon the earth, for the growth of beings. I wished much to see this.'" From these curious facts we may learn several important truths. From sight alone, and perhaps even from our muscular sense, we may obtain a notion of superior and extraneous existence with power over us. Yet we suppose intuitively that this power is to be actuated in some way by the expression of our own wills, and if it yield not to our desire, then a feeling of wrath or a painful sense of unfitness and incongruity arises from the non-fulfillment of a natural expectation. We see, also, the dependence of our enjoyment on sympathy, not only with those whose kindness causes us to love them, but even with inanimate things, such as plants and flowers, in short, with whatever pleases us. We see, too, that revenge is the ignorant expression of disappointment and vexation. It also appears that we naturally feel confident that there is a power above to help, but not to injure ourselves, and that fear of retribution is a feeling acquired from a knowledge of moral responsibility, or from the experience of injury. The idea of a God, that is, of a ruling power, seems also to be instinctively associated with the human form, probably because it alone duly represents mind in operation as in ourselves. Thus, among the first questions which the benevolent skill of the lady, known to the public as Charlotte Elizabeth, enabled the deaf-mute, whom she educated, to put to her was, whether she had made the sun and the moon.

We may easily from hence perceive how idolatry is apt to take precedence in all attempts at formal worship among the ignorant, and that because they can not limit the possibility of power in human manifestation.

The gift of sight and the world of form and color, belonging to this sense, in an especial manner declare, as in the full light, that God loves us; for everywhere

the mind that is not perverted by a pitiable depravity, beholds something to gratify and ennoble it. And the purpose of education, and of the word of God, is to bring our faculties into such a state of control that we may be able to draw our attention from evil communications, and fix it upon the grand visible facts of nature and of Providence. All truth is beautiful. Could we but view this wondrous world with a pure eye, we should be overwhelmed with such a sense of perfection as to hate whatever would suggest a thought derogatory to the glory of God or the dignity of man. This, however, notwithstanding the enchantments of poetry, is impossible at present. We must witness perfect manhood, and perfectly sympathize with it, before the soul will be wise enough to enjoy beauty to the full. When we are thus filled with God-love, we shall possess finer tastes and sensibilities than the highest classic descriptions ever inspired. But contrasts and opposites must exist in nature, to instruct us to reason by engendering doubt; for before we can rightly decide, we must inquire. Where there is no choice, there is no freewill. Good and evil are alike requisite to our growth in character, and the darkness of night is as necessary as the light of day, in order to reveal the might of our Maker; and many parts of creation must be rendered unpleasant to us, that we may mentally travel onward in search of the perfectly good, or be enabled to seek rest in the faith of the soul, rather than in the impressions of sense.

If we dwell a little in thought upon the phenomena of sight, as regards their influence on our minds, we shall be better able to appreciate the value of sensation generally, and the goodness of the Power that qualifies us to interpret nature, by changes taking place in the organism pervaded by our souls. We must remember that the field of vision is altogether a mental conception; for without the use of our other senses, and a power of

judging between their intimations, we could not perceive distance. Without this sense, we should receive only an indefinite feeling of individuality, and perceive just enough of the external world to be conscious of contact. The sense of touch being the chief medium of knowledge in the blind, they usually attend more to its indications than do those who enjoy sight; and it is said that they sometimes become, by use, so sensitive to the peculiarities of tangible objects, as even to discriminate between different colors. This influence of habit and attention on the power of sense is a beautiful proof that our perceptions are due rather to the soul than the body, inasmuch as one being employs all the senses, and chooses acccording to circumstances which he will attend to. Such is our nature, that when we have experienced sensation in its different kinds, we scarcely ever after attend to the objects of one sense without associations with the objects of other senses being awakened. Thus the enjoyment of music arises in a great measure from the rapid succession of ideal visions it suggests, while the sight of a good picture begets vivid ideas of action and of discourse. While we look upon the sea, we fancy we hear its murmurs; and when, at the sight of a shell we only imagine its native abode, and close the eye, the mind beholds the billows sparkling in the sunshine, and the gallant ships dashing them aside as if proud of their banners and array.

There is no end to the benevolent arrangement by which our mental associations are maintained; but we may judge somewhat of its nature by considering how our attention is called from object to object, and from idea to idea. If we examine the causes of our pleasure in viewing a number of natural objects grouped together, we shall find that much of it is due to the power of association and mental habit. Let us test this statement by gazing at a variety of figures and colors arranged in

order, but without formality, as in architectural ornaments, such as flowers and arabesque. The attention being directed to one point after another in rapid succession, a sort of life-like impression is received, and we are put in mind of such a variety of actions, that fancy becomes so bewildered by her own creations, that a strong effort of the will is required to prevent our yielding to the emotions excited. Thus memory mingles with sight, and the past becomes present. The sentiments induced will be painful or pleasant, according to the previous habit of the will and understanding. The operations of the intellect, and the associations of imagination, are, indeed, directed and determined by the habits of a man's life, for the objects presented to the eye always engender thoughts in keeping with his prominent affections. We delight in serene and solemn mazes of beauty, in quiet faces, clear colors, infinite lights, and infinite shadows, when the soul is accustomed to dwell in peaceful and religious abstractions, because this temper of mind is nursed by heavenly hopes that interpret mysteries to us in the language of love, and lead us along through vistas of sublime visions, always ending, as they begin, in high and holy thoughts, calm and silent as the light of stars. But vulgar, sensual minds know nothing of this pleasure. Beauty never conducts them to heaven. Were they stationed on the Alps, and could they see the sun rise upon the world as if upon a new creation, the grandeur of clouds decked in rainbows, the rosy ocean of vapor, with many mountain tops rising around like islands of light, the profundity, the sublimity, the combination of the lovely and everlasting, and whatever of beautiful in form and hue the light of heaven might reveal, would not elevate uncultivated minds beyond their own chaos. Superstitious fear, indeed, may be there, turning light into darkness, from which ignorance would be glad to be called away

by any trifle; but the spirit of religion pervades not the soul with her blissful peace, until faith in the perfections of God associates the mind with the infinite. Then we behold the steps of light by which the angels visit earth; on the bare brow of the mountain a vision of beauty and glory surrounds us, and we exclaim, this is the house of God, the gate of heaven!

That we read both nature and art, not according to our intelligence merely, but rather according to the state of our moral feelings, is well demonstrated in books of travels. It is really most interesting, and not less instructive to compare the descriptions of the same objects by different writers. Lord Lindsay, in his "Letters from the Holy Land," affords us a passage to the point: "I do not like the Corinthian; the 'airy pillar' and the decent matron grace of the Ionic are far lovelier, far purer, far holier; the Doric and Ionic remind one of Adam and Eve, as they walked in naked innocence, and in all their original brightness, through the bowers of Paradise; but the spirit of the Corinthian is meretricious: this is fanciful, perhaps, but oh, there is a deep poetry, a hidden melody in architecture—'frozen music,' as it has been called; but it thaws now and then, when the fancy warms, and discourses most eloquently to the eye and ear." No doubt Lord Lindsay's heart was at home when these thoughts sprung up from it; and had he not been in mental association with some refined feminine soul, the "frozen music" would never have flowed harmonious to his fancy.

The mind forms images for itself out of the multitudinous actions of the nerve-matter involved in sight, whenever the mind is using this matter, that is, whenever attention is so directed as if employing the eye. Dr. Gregory, Professor of Chemistry in the University of Edinburgh, relates an illustrative and interesting case in the "Phrenological Journal" (Jan. 7. 1845). A

lady suffering from influenza complained that, when in bed with her eyes shut, she saw objects of most vivid colors, and in the most distinct forms. The doctor tried to modify her impressions by pointing to different parts of her skull, after the manner of phreno-mesmerists, and he found some coincidences which seem to confirm the phrenological notions concerning the location of the faculties. On being asked, while her eyes were closed, what she saw, she replied, "Beautiful colors." The doctor then placed his finger over color, without making any remark. She instantly said, "All the colors are gone;" but then added, "they have come back—how exquisite!" He then placed his finger on number, she immediately exclaimed, "I see the room full of the most brilliant rainbow colors; there must be millions of them." He then touched order, when she said, "I see a multitude of the most beautiful patterns of all colors, like the figures in a kaleidoscope." Size being touched, caused the exclamation, "Oh, what a beautiful cathedral, with beautiful colored windows! I can not see to the end of it."

This lady knew something of the general outline of phrenology, and might therefore have had ideas suggested to her mind, by pointing to the organs; but whether she sympathetically caught the design of the experimenter or not, we have no reason to doubt the honesty of her evidence as to the fact of these visions being excited by certain states of the brain under the direct operation of the mind, which certainly possesses the faculty of forming its perceptions irrespective of present impressions on the senses.

Dr. Gregory states that in this case the results were always equally distinct in the excitable organs; while the non-excitability of the others was quite unexpected, and, in fact, disappointed him a good deal.

I have witnessed a case somewhat analogous in an

hysterical young lady, who had wearied her brain and eyes by peering day after day into the pattern of her brilliant Berlin work. Here the visions spontaneously shifted through all imaginary changes; at one time as full of flowers as a horticultural show, and at another as full of faces as a crowded theater; but still, whatever forms appeared, a rainbow radiance seemed always to clothe the whole field of vision. The ideas were modified by external impressions, but the oddest modification was, that a number of fierce cats seemed to appear, whenever a bell rang. The mind created its own visions through that part of the brain which had been inordinately used, the other parts remaining comparatively unexcitable. Probably the brain of Dr. Gregory's patient had been partially wearied and rendered morbid in a similar manner. We know that the nervous structure, subservient to sight, may be so exhausted by overaction under the demands of the will, as for days after to present confused spectra, according to the nature and color of the objects on which the eye had been exerted. These phenomena result from the reaction of those parts of the brain which had been fatigued, under the renewed excitement of the mind in using it while wearied. Sleep and change of employment are the natural remedies for this morbid state. A gentle stimulant more effectually serves to divert attention from such phantasms than either narcotics or sedatives, and perhaps the best stimulant is brisk exercise, in a pleasant place, with a cheerful companion.

The connection of these abnormal states of the brain with dreams is obvious; but yet no imaginable conditions of brain will account for certain visual impressions which occasionally occur in sleep. A person well known to me dreamed that he was alone in a certain churchyard, amusing himself, as he had often done, by reading the quaint epitaphs, in the light of the setting sun. A

new grave attracted his attention. At its head was a remarkable stone, on which he distinctly read the date of death and the name of the deceased; it was that of a dear friend, whose company he had that evening enjoyed. Such a dream was sufficiently painful to impress his memory very strongly, but deeming himself too philosophic to be moved by such a circumstance, he cast off the impression, or thought but little of it, until seven months afterward, when the death of his friend, at the very date he had dreamed, startled his philosophy. If we consult the works of those who have written on this subject, such as Dr. Abercrombie or Macnish, we find they relate a number of such marvelous coincidences, and really speak of them as if they were easily accounted for. Thus, a young lady of Rosshire dreams that she sees her lover slain on a certain day at Corunna. The event happened exactly as she dreamt. Dr. Macnish dreams of the death of a relative, three hundred miles off. Three days after he hears that his dream represented the truth, although there had not been the slightest anticipation of any such an event. Mrs. Griffiths wakes from her sleep, screaming out, "The boat is sinking—save them!" She was uneasy about a proposed fishing party, of which her husband was to be one; thus the dream was quite natural; so she quietly fell asleep again; but soon she awakes up in terror, saying, "The boat is going down!" This of course arose from the former dream; therefore she composed herself a third time to sleep, but quickly starts up in agony, exclaiming, "They are gone—the boat is sunk!" Her husband, a major in the army, caught alarm, and excused himself from his engagement; but the rest of the party went, and were all drowned. Such cases, of which multitudes might be collected, are among those most easily attributed to mere coincidence; but we will take another, for the accuracy of which Dr. Abercrom-

bie vouches. Two sisters were sleeping together in a room communicating with that of their brother, when the elder of them awoke in a state of great agitation, and, having roused the other, told her that she had had a frightful dream. "I dreamt," she said, "that Mary's watch stopped; and that, when I told you of the circumstance, you replied, 'Much worse than that has happened, for ——'s breath has stopped also;' meaning their brother, who was ill. The following night the very same dream occurred, followed by similar agitation, which was composed, as on the previous occasion, by finding the brother in a sound sleep, and the watch going well. On the next morning one of the sisters was sitting by her brother, while the other was writing a note in an adjoining room. When her note was ready for being sealed, she was proceeding to take out, for this purpose, the watch alluded to, which had been put by her in her writing-desk—she was astonished to find it had stopped. At the same moment a scream was heard in the other room—the brother, who had been considered going on favorably, had been seized with a sudden fit of suffocation, and had just breathed his last." I might refer to cases in which the perpetrators of crimes have been discovered by dreams, or to instances in which marked advantages to individuals or to society have resulted. In such cases it might be argued that there was sufficient cause for supernatural interference; but how can we believe that prescient dreams have been permitted without any apparent purpose? I have quoted these cases with the intention of showing that, as we can no more explain those dreams that are manifestly beneficial, than we can those seemingly useless, we must refer to something beside our estimate of their value for their occurrence. Theories of chance, coincidence, and association are at fault, and only prove our presumptuous unwillingness to acknowledge entire igno-

rance of the right causes of mental action. If a prescient faculty be proved, then the human mind is evidently capable of deriving immediate instruction from superior intelligence without the use of mere sense; and if the soul can distinctly and correctly behold facts before they really occur, then it is evident that to the soul appertains the future as well as the past; and it can not be the result of material changes, since it may realize the ideas of circumstances before the circumstances themselves exist.

There is another form of supersensuous vision, for the existence of which we can scarcely discover sufficient reason, unless to intimate an undeveloped faculty which, in another state, may be proper to man. The nature and character of this strange endowment will be best expressed in the language of one who believed himself to be possessed of it. Heinrich Zschokke, a man remarkable for the extent of his honorable labors as a statesman and an author, solemnly writes the following passage in his autobiography: "It has happened to me sometimes, on my first meeting with strangers, as I silently listened to their discourse, that their former life, with many trifling circumstances therewith connected, or frequently some particular scene in that life, has passed quite involuntarily, and, as it were, dream-like, yet perfectly distinct, before me. During this time I usually feel so entirely absorbed in the contemplation of the stranger's life, that at last I no longer see clearly the face of the unknown wherein I undesignedly read, nor distinctly hear the voices of the speakers, which before served in some measure as a commentary on the text of their features. For a long time I held such visions as delusions of the fancy, and the more so as they showed me even the dress and emotions of the actors, rooms, furniture, and other accessories." He was at length astonished to find his dream-pictures invariably confirm-

ed as realities, and he relates this instance as an example of his visionary gift: "One day, in the city of Waldshut, I entered an inn (the Vine) in company with two young students. We supped with a numerous company at the table d'hôte, where the guests were making very merry with the peculiarities and eccentricities of the Swiss, with Mesmer's magnetism, Lavater's physiognomy, etc. One of my companions, whose national pride was wounded by their mockery, begged me to make some reply, particularly to a handsome young man who sat opposite to us, and who had allowed himself extraordinary license. This man's life was at that moment presented to my mind. I turned to him, and asked whether he would answer me candidly if I related to him some of the most secret passages of his life, I knowing as little of him personally as he did of me. He promised, if I were correct, to admit it frankly. I then related what my vision had shown me, and the whole company were made acquainted with the private history of the young merchant—his school years, his youthful errors, and, lastly, with a fault committed in reference to the strong-box of his principal. I described the uninhabited room with whitened walls, where, to the right of the brown door, on a table, stood a black money-box, etc. A dead silence prevailed during the whole narrative, which I alone occasionally interrupted by inquiring whether I spoke the truth. The startled young man confirmed every particular, and even, what I had scarcely expected, the last mentioned. Touched by his candor, I shook hands with him, and said no more. He is, probably, still living."

We possess no means of testing the truth of such statements, and every reader must judge of the testimony according to the character of his habitual faith. Reference to such matters could not be fairly avoided in a work like the present, more especially since the sub-

ject bears so directly on the credibility of those numerous relations, received from all quarters, concerning the exaltation of faculty exhibited by susceptible individuals while under the influence of animal magnetism; but I shall content myself with observing, that it is at least quite as difficult to explain how it happens that such a number of independent witnesses should agree in their evidence, supposing it to be false, as to account for the facts, supposing them to be true.

Seeing that the equilibrium of repose is disturbed by internal influences, entirely unknown to us, and that changes may be effected in the brain by which the mind may have entirely new conceptions, apart altogether from objects of sense, and perhaps be directly influenced,—that is, without even the intervention of peculiar states of brain,—there can be no reason why certain individuals, under superior direction and operation, should not be instructed in truths beyond common perception, and be enabled, under some spiritual law or power, to interpret ordinary impressions in keeping with peculiar moral states, and in manners naturally new and incomprehensible. No doubt the prophet and the seer of old were informed by higher mind to understand common objects in uncommon relations, and to use their eyesight with a judgment illumined by the light of futurity. Even the poet so looks upon facts as that the past and the absent form one picture with the present, in which imagination perceives a world to come; and every act of reasoning by which we infer one thing from another, is due to a power that arises, not out of our organization, but belongs to an intuitive perception of congruity and fitness.

Every visible arrangement exerts a peculiar effect on the mind, by producing a corresponding change in the nervous matter through which we see; but yet that the state of mind preceding the impressions received on the

retina modify their influence, is manifest from the fact that imagination, as before observed, gives distinct shape to uncertain forms, and converts a dim and obscure object into a defined likeness of whatever either fear or desire may induce. Thus, a man walking alone in the twilight is apt to suppose he sees what exists only in his mind as a thing likely to be seen where he then happens to be. This arises from the mental action exciting a peculiar condition of nerve. None but those who believe in ghosts ever see any. Brutus, being a Platonist, under the excitement of a bad conscience, in darkness and in solitude, could well realize his evil genius, although perhaps he only dreamed of its presence. Dreams are, doubtless, the frequent cause of a confirmed faith in apparitions; for, in highly imaginative persons, the visions of slumber are often so powerfully impressed on the brain that the optic nerve presents, even to the awakened sight, the visible form of what was only imagined or remembered. Thus Sir H. Davy relates an instance in which a dream was so strongly impressed on his eye, that even after he had risen and walked out, he could not be persuaded of its unreal nature until his friends proved its reality impossible. His brain was then probably in a diseased state, approaching to that of insanity; for his case only differed from mental derangement, so far as that he was still open to conviction by the reason of others, when his own faculties of comparison failed to correct his judgment. This kind of mental delusion may become epidemic and contagious. There is good reason to believe that a multitude of persons may, under similar circumstances of excitement and attention, and under the same motives, imagine they see precisely the same objects. Thus the Roman army saw Castor and Pollux in the van of battle, and the vision of St. George conducting them to conquest was no uncommon sight with the su-

perstitious crusaders. Dr. Laurent informs us that a whole regiment, under his own observation, dreamt the same dream at the same time, and all started up at once, declaring that a black dog had jumped upon their breasts and disappeared. It is exceedingly remarkable that the same thing happened again on the following night. Dr. Laurent attempts to account for the circumstance by supposing some deleterious gas to have been generated in the monastery, in which the singular incident occurred. But whatever the agency might have been, the difficulty is to explain how it operated on such a large number at the same moment. The explanation appears to be found in the fact, that they had all heard that the place was haunted at a certain hour; and although they felt no apprehension while awake, yet, when asleep, their souls were stirred together with affright at the approach of the anticipated moment. It is the prerogative of faith to behold invisible things, but the difference between a true faith and a false is all that exists between an enlightened reason and a bewildered fancy, the creation of God and that of a demiurge.

Like the patterns seen in the kaleidoscope, the broken images of the past reappear in ever varying forms at every turn, and memory conjures up the visions of our imagination, in reverie and dreaming, by scattering these fragments before us, which by some mysterious law are rearranged into new pictures. This mosaic-work of the mind is probably, in some measure, determined by the state of the retina, and of that part of the brain subservient to sight, for it is usual in diseases of those organs to find the most vivid scenes suggested to the mind by the changes taking place in them. Yet it is indisputable that the nature of the objects perceived, depends, in a great measure, on the previous habit of the mind. Goëthe has recorded some facts in his experience which confirm this remark. He says: "When I closed my

eyes and depressed my head, I could cause the image of a flower to appear in the middle of the field of vision; this flower did not for a moment retain its first form, but unfolded itself, and developed from its interior new flowers, formed of colored and sometimes green leaves. These were not natural flowers, but of fantastic forms, although symmetrical as the rosettes of sculptors. The development of new flowers continued as long as I desired it, without any variation in the rapidity of the changes. The same thing occurred when I figured to myself a variegated disk." Müller, the physiologist, contrasts this experience with his own, for he also frequently saw different figures when he lay quietly down, but they never presented the slightest tendency to a symmetrical development. We may account for the difference by the circumstance that Müller confined his attention to actual objects as a physiologist, while Goëthe was accustomed to exert all the creative faculties of the poet and the painter. Imagination was the world of his will, and fancy was constantly picturing new ideas before the eye of his mind, or developing into new forms of beauty those with which he was familiar.

Nor is it uninstructive to remember that Goëthe, when best able to give a type to the phantasms of his mind, was intent on theorizing concerning color and form. His visions were rather the result than the cause of his study, and he mentally saw what he wished. Probably in his case, as in the case of those presented with less agreeable visions, some degree of congestion existed in the brain, as we find that a certain position favored the ideal floral creation. He was, moreover, as much addicted to the inordinate use of his stomach as of his brain, and therefore it is not surprising that both his senses and his passions were subject to unusual excitation, for it is invariably found that causes which disturb sensibility also promote emotional disorder.

It is probable that ideas or remembered impressions are always accompanied by a state of the sense similar to that in which the impression of the object recalled was first received, and hence it happens that when the brain is disturbed by disease, memory becomes confused and the order of association is broken; ideas interfering with objects and objects with ideas, just as the sensorium may be fitted to respond either to the mind or to the senses. The mind seems to reflect its impressions back through the brain to the senses in the same manner as it received them. That images seen in dreams are really impressed on the organ of sight any one may be satisfied who will accustom himself to open his eyes immediately on waking from a dream. The images dreamt of continue visible for some time if the attention be not called to other objects. This phenomenon accounts for many wonderful stories of specters and hobgoblins which are so apt to haunt the dreamy souls of those who, corrupted by evil communications, make their senses but the ministers of superstition. A multitude of instances in which peculiar states of health have favored the production of remarkable impressions on the senses, are fully related in Dr. Hibbert's work on the Philosophy of Apparitions, and also in Sir Walter Scott's work on Demonology and Witchcraft. The case of Nicolai, the Prussian bookseller, is often quoted. He was visited by a great variety of busy phantasms which he could scarcely distinguish from reality, for they blended with the company into which he entered in the most amazing and natural manner. They appeared to him as distinctly as if they were alive, exhibiting different shades of flesh color in the uncovered parts, and great variety in the colors and fashions of their dresses. It is remarkable that he also imagined he heard their voices when they seemed to be talking to each other. These strange visitors ceased their annoying familiarity

on the use of means calculated to restore the brain to a healthy state. In this case the visions were quite involuntary; but Blake, the painter, seems, according to Cunningham's memoirs of him, to have possessed the power of calling up such phantasms at will, though still they sometimes so mastered his judgment that he confounded them with realities. He was in the habit of conversing with angels, demons, and heroes, and taking their likenesses, for at his request they in general sat very patiently until he had transferred them to paper. To oblige a friend, he summoned Sir William Wallace to sit for his portrait, and had proceeded for a considerable time, with the steady care of eye and hand so necessary to one who would take an exact likeness, when suddenly he exclaimed, "Edward the First has stepped in between him and me!" So he took a portrait of Edward too; but how far he succeeded in taking his veritable effigies we are not informed, although, doubtless, intelligence on this point would help us to a theory of ghost-seeing somewhat clearer than any we possess.

From all the foregoing facts we discover that the mind possesses the faculty of conferring distinctness of form and arrangement on the confused gleams of impression perceived in the nervous structure when diseased, and, of course, we can in this manner account for the strange phantasms of delirium and madness, when the soul, being intently busy with these inward suggestions, ceases duly to regard those objects of sense by comparison with which the delusion might be rectified. In the milder forms of delirium and insanity, this power of correcting fancy by appeal to sense is retained, and the most successful mode of treating them is to employ the faculties in an outward manner, by engaging the mind on objects demanding the use of all the senses, while, at the same time, the health of the body is suitably regarded.

When the eye is, so to speak, obliged to fast from the pleasant and familiar objects endeared to the soul, a peculiar state of brain is induced, by which all the senses are marvelously disturbed. The following words of Milton haunt the memory of most readers:

> Of calling shapes and beckoning shadows dire,
> And airy tongues that syllable men's names
> On sands and shores and desert wildernesses.
>
> *Mask of Comus.*

The prevalent superstitions of the Arabians are probably here referred to, for these people, while wandering in the desert, are apt to have their imaginations called into excessive activity by the absence of all those objects which through their senses may awaken social sympathy. Delirium under these circumstances takes the place of natural perception, especially when the nervous system is exhausted by fatigue and the feeling of loneliness. Thus we may easily account for the many authentic tales of travelers being seduced by goblins to wander from their path to perish in despair. On the same principle the superstitions of the American Indians may also be explained. When a lad is arrived at the period of life to choose a tutelary deity for himself, he retreats into the depths of some vast solitude, and there fasts and dreams, until he thinks the "Kishe Manito" (the Almighty) selects for him some object, such as that of a snake or a bird, by which he is to represent the form of his presiding spirit or personal god, and this he wears always about him, and to this he addresses his prayers as an intercessor through which his vows must pass before they can reach the fearful Lord of all things. The impression on the retina seems to be merely suggestive, the idea conceived being determined by mental state and condition, as exemplified by insanity and the influence of imagination on the sight. As an instance of this power, Lord Lindsay relates that his fellow-traveler, Mr. Ram-

say, a man of strong sight, and by no means superstitious, when crossing Wady Araba, in momentary expectation of encountering the Jellaheens, distinctly saw a party of horse moving among the sand-hills, although their actual presence there was impossible. He, however, could not divest himself of the impression that he had seen them, so strong is the power of fancy when excited by unnatural solitude, and the absence of accustomed objects. Fixing the eye for a long time on the same spot, with the intention and expectation of seeing some definite object, may very probably have the effect of so disturbing the optic power, especially in children, that the confusion of impressions or visual sensations thus produced may, under the action of the mind, cause objects seemingly to appear as expected. The monotonous enchantments of the Egyptian magicians, mentioned by Mr. Lane and others, were probably so far successful on this principle, for we find that those degenerate magi employed boys to look into a spot of ink on the hand, until they fancied they saw before them, and were able to describe, persons who were named. This mode of magic is most likely to favor that state of nerve which may be called self-mesmerism, and which Mr. Braid, of Manchester, has fully and familiarly demonstrated to be capable of inducing all those mental phenomena called phreno-mesmerism.

It would be exceedingly interesting to trace in detail the influence of the faculty of interpreting impression, according to certain laws of order and arrangement, for we should probably thus discover many important facts concerning the operations of memory and imagination, and the subjection of our moral nature to things of sense. But it is a subject worthy of a distinct treatise, and it can only be indicated in this place. According to these laws, even the flashes of light in the brain of the blind man seem, as we have seen, to run into forms of beauty,

and we know that the shapeless coruscations of the aurora borealis are, by vulgar minds, that have heard of horses of fire and chariots of fire appearing in the sky, described and doubtless perceived with such distinctness, that the listener almost imagines he too beholds the movements of embattled hosts upon the plains of heaven. This involuntary disposition to give resemblances to all visible things is probably essential to the exercise of our reason, and although imagination may interfere with judgment, by her wilder and more licentious suggestions, yet it is by her aid that we observe analogy, associate objects, and draw comparisons. It is also a vast help to memory, and the artificial system of mnemonics might probably be carried into more successful practice if it were constructed on perfectly natural principles, that is, if words and their meanings were embodied in pictures of natural objects, or, at least, associated with form and color, instead of being only an additional artifice to burden the mind. Dr. T. Arnold became a most admirable historian and geographer in consequence of his memory being assisted in youth by pictures and dissected maps. He himself attributes much of his clear insight into geography to familiarity with the flags of different nations.

Scenic representations certainly form the most forcible and natural means of awakening attention, and giving distinctness to memory, and therefore, when managed in a suitable manner, they would be divested of danger, and rendered most available toward the advancement of education.

Whatever suggests the appearance of living action is most agreeable and enduring in the mind. Our knowledge is intended to be associated with our feelings. Hence it is difficult to teach children the rudiments of language without associating even the forms of letters with their ideas of actual life and motion. Every lesson should be on objects. God's works and man's are what we have to

learn, and he whose mind dwells in books without familiarity with things, lives in a dream; his reason is unsettled, he has no true faith, for the world of true faith is a true world full of great facts of a palpable kind, which none but madmen would dispute about. Hence the importance of familiarity with physical science, and the positive operations of mind on mind, and the grand events of providence and history, to the formation of a true philosopher.

Natural objects seen in natural order are far better remembered than what is merely heard; and yet if we properly attend, we generally retain the fact stated in a lecture much more distinctly than those related in a book which we only curiously read, and this seems to arise from our imaginations being more called into action to realize what we hear than what is merely presented to us in printed words; for spoken language is natural, and excites our nerves sympathetically according to intonation of voice, but letters are altogether artificial and conventional, requiring an effort to interpret them; so that to enjoy books thoroughly, it is necessary that the reader should be quite habituated to reading, and accustomed to constrain his mind to idealize. The prolonged attention to minute objects, as in print, is itself disturbing to the faculties, and requires a long labor to overcome its evil effects. Indeed, it is not improbable that great readers are invariably awkward and untoward men, because the habits of their minds are unnatural, that is, without proper sympathies, and some of their faculties benumbed by too constant a use of their eyes on print, instead of human faces, and the many eloquent objects of nature. The unnaturalness of reading is seen in the vast difficulty experienced in educating by this means, through the medium of books, those persons who have not been accustomed to apply the eye to the discrimination of minute objects. Even the children of such persons from hered-

itary formation are scarcely able, under the strongest motives, sufficiently to fix their attention on letters to learn them. This difficulty is especially observed among wandering tribes. Hence we learn the wisdom of that command, *Go ye* into all the world and *preach*. Bibles alone will never convert the nations. Men, with the spirit of its truths within them, must utter the glad tidings, for reading is a formal, cold, hard, and often unprofitable work, for which the millions have neither time nor patience enough, and if they had, the truth in words still needs the life of the human voice and soul, in order fully to be felt and propagated sympathetically in all its force.

The heavens excite our wonder by indefiniteness of extent and countlessness of objects. The beautiful is lost in the sublime among stars, because where order most prevails, yet there the infinite multitude of rolling orbs, "in number beyond number," appear to be disposed without design, or as if flung from the hand of Omnipotence into space, to find their places like the drops that compose a cloud. But our souls look for order and beauty. Darkness and indefiniteness alike confound us. That sense of awful mystery which we call a feeling of sublimity, necessarily overwhelms us when we can not trace the might of God in the arrangements as well as in the existence of the universe; for where we behold not order, there we seem not to see the work of Him in whose providence we desire to trust, as on his power we must depend. On this account, as it appears to me, man instinctively endeavors to discover evidences of design as soon as he apprehends the existence of the Almighty, for he can not bear to feel himself at the mercy of a power that gives no proof of his benevolence. We naturally look for love in the works of Omnipotence, and we are not disappointed; for light bears that name of our God inscribed on every ray; and every form which it reveals, when examined by reason, is found to signify the same. We gaze,

therefore, on the spangled sky, and would fain pry into the countless charities of Heaven. We can not be content with doubt. We can not look into the *nebulæ*, and be satisfied to suppose the galaxy of glory a chaos of light without creatures to enjoy it. The comprehensive telescope is at length contrived and erected. Reason has conquered, and the reluctant materials are obedient to the human mind, which exults with a vast joy in keeping with its vision, while beholding the confused clouds of glory resolving themselves into systems of orderly worlds, which intuitive faith assures us must be teeming with happy dwellers.

The notion, so common among pagan nations, that light proceeds from one source and darkness from another, appears to be very natural to minds uninstructed. When we consider the influence of all the visible glories of heaven and earth upon our own feelings, how easy is it to imagine goodness associated with the power which reveals a world of beauty, and evil with that which hides it from our sight, and brings darkness with its terrors close about us. And, indeed, were we left to gather our creed from nature alone, we might well worship the sun as our manifested deity; but our happiness hangs on the brightness of a better glory, and on the word of Him who declares, *I am Jehovah, and there is none else; there is no God beside me; I form the light and create darkness. Darkness and light are both alike to me.*

We are blessed with the power of imagining order where we do not at first perceive it; and whether we regard the hosts of stars, or merely gaze in vacancy upon the broken outlines of more familiar objects, we involuntarily conceive resemblances, and lines of beauty and of meaning among them. Thus the Chaldean shepherds crowded the heavens with the likenessess of things earthly; and the poet, in his reverie, is

> Soothed with a waking dream of houses, towers,
> Trees, churches, and strange visages, expressed
> In the red cinders. COWPER.

Here we see the connection between memory and imagination, and are assisted to understand how the mind, when not intent on outward objects with a definite purpose, or in fulfillment of any desire, takes suggestions from whatever the senses may offer through the brain to carry out the train of past impressions, and to mingle ideas into new combinations, so as to form fresh experience out of old facts. We can not reflect on this extensive subject without arriving at the conclusion, that there is a specific purpose and meaning in every form, however minute, and in every pattern, however intricate; and that the image and color of every visible object have direct relation to some mind expressly created with faculties to be impressed by such means. And not only so, but if we reflect on the wonders which the microscope has revealed to view in the minute and almost invisible world of life, and consider that the smallest division of a crystal indicates its chemical composition by the disposition of its angles, we shall discover more and more reason to admire the wisdom that thus connected sight with knowledge.

If we consider the countless amount of different beings on this earth, each gifted with peculiar sensibilities, and each provided with peculiar objects suited to its senses and its capacity of enjoyment, we shall partly understand why there exists such an infinite variety of forms, colors, perfumes, surfaces, and sounds, in nature. Every sensible property of matter is addressed to the sense of some creature, and is especially fitted for its pleasure. Not a

> "Flower is born to blush unseen,
> And waste its sweetness on the desert air."

Busy myriads are blessed where man never wanders. Thus, as regards mere form and color, it is manifest

that the insect tribes, for instance, distinguish each other, and their proper food and proper dwelling, by the observation of differences in those respects perfectly microscopic. They keep in families, and are preserved in their appropriate places by instincts, dependent on peculiarities in form and color, so minute that the naturalist can scarcely perceive them, even when best taught by science. Though the world of flowers and perfume is not created so much for man as for beings generally disregarded by him, yet he can not scrutinize a blossom without improving his sense of beauty, nor be influenced by a color, without some corresponding change in the state of his affections. Let not this observation be thought a refinement of fancy; it is a fact, that man can not be intellectually acquainted with natural beauty without acquiring a clearness of spirit and a serenity of heart unknown to ignorance; for thus, in truth, he becomes familiar with the mind of God. Yet he who has not already learned, in a measure, to appreciate and enjoy the goodness of pure wisdom, has scarcely a proper taste for the science of nature. There is a solemn greatness in the pursuit which those dream not of who handle God's creatures merely for amusement; they play like children with their shells and flowers, while the Maker of the universe invites them to look into the everlasting mysteries of his might. It is in studying the divine ways that we learn the divine will, and in humble intimacy with his works we see the wisdom and the blessedness of obedience to His word. Faith is the beginning of all knowledge; and that man's understanding is sure to be good who does not expect intellectually to arrive at right conclusions, without having first set himself, with all his power and with the consciousness of supernatural aid, to keep his conscience clear both toward God and toward man. Thus faith becomes one with love, and love one with will.

We comprehend form and color to a great extent without education, because they are created to suit our minds and to awaken our intuitive faculties; but their influence will, of course, be modified by habit. Attention, also, and the degree of fixedness with which we regard an object, will greatly affect our impressions, since it is a law of the power by which the retina acts, that objects should appear and disappear when gazed on intently. Here it should be observed, that the image of any object ordinarily remains on the retina about the sixth part of a second, as may be proved by rapidly whirling a piece of lighted charcoal before our eyes. It gives the idea of a circular ribbon of light, because the image is retained during the whole revolution, if made within the specified time. Under certain conditions of the nerve, the impression is greatly prolonged. The images seen in a strong light appear, when we turn to other objects, in supplementary colors. Thus, if we look upon moving objects, such as the waves of the sea, until the optic nerve is fatigued, and then look at fixed objects, these will seem to be in motion, and their color too will be modified by the supplementary impression excited in the nerve. Thus, ocular spectra interfere with each other in a manner that well accounts for many startling stories among the ignorant and superstitious. We can easily imagine a devotee in his inane adoration, under the influence of a monotonous idea, and perhaps exhausted with fasting, gazing at the image of his idol-god, a mere misshapen mass of blackened clay, until he can not turn away his eye to the clear sky without beholding a magnified and brilliant vision of his fancied deity. Who, then, shall cure him of his madness, without imparting to him a knowledge of natural laws? To tell him his fancy deceived him, is to persuade him out of his senses; *he saw* what he believes, while rational worshipers believe what they can not see. Certain wonderful appearances, supposed to be produ-

ced by animal magnetism, may probably be accounted for on the same principle. The well known case of an intelligent and highly gifted lady, as related by herself in the "Athenæum," is peculiarly instructive. "Various passes were tried by Mr. Hall; the first that appeared effectual, and the most so for some time after, were passes over the head, made from behind—passes from the forehead to the back of the head, and a little way down the spine. A very short time after these were tried, and twenty minutes from the beginning of the *séance*, I became sensible of an extraordinary appearance, most unexpected, and wholly unlike any thing I had ever conceived of. Something seemed to diffuse itself through the atmosphere—not like smoke, nor steam, nor haze, but most like a clear twilight, closing in from the windows, and down from the ceiling, and in which one object after another melted away, till scarcely any thing was left visible before my wide-open eyes. First the outlines of all objects were blurred; then a bust, standing on a pedestal in a strong light, melted quite away; then the opposite bust; then the table with its gay cover; then the floor, and the ceiling, till one small picture, high up on the opposite wall, only remained visible, like a patch of phosphoric light. *I feared to move my eyes*, lest the singular appearance should vanish, and I cried out, 'O deepen it—deepen it!' supposing this the precursor of the sleep. It could not be deepened, however; and when I glanced aside from the luminous point, I found that I need not fear the return of objects to their ordinary appearance while the passes were continued. The busts reappeared, ghost-like, in the dim atmosphere, like faint shadows, except that their outlines, and the parts in the highest relief, burned with the same phosphoric light. The features of one, an Isis with bent head, seemed to be illumined by a fire on the floor, though this bust has its back to the windows. Wherever I glanced, all out-

lines were dressed in this beautiful light; and so they have been, at every *séance*, without exception, to this day." Maniacs, in the commencement of their disorder, often perceive surrounding objects as if enveloped in fire, and this seems to arise from the intense excitement of the eye under undue activity of the brain, a state not unlikely to be induced by mesmeric stimulation, and perhaps by the accumulation in the cerebrum of that imponderable medium which seems to be the cause of sensibility.

Professor Wheatstone has most ingeniously demonstrated that while binocular vision proves that though the impressions on both eyes are communicated separately to the brain, they are yet beyond question combined into one perception, not by union of nerve-fibers, but by unity of action in the mind itself. There is singleness of sight, with duality of impression; and the two eyes serve one purpose, as long as they can be equally directed to the same object; but, as they have different axes, of course we should always see double, if they were not voluntarily thus employed together on one thing at a time. We find that as soon as this mental control is interfered with by disorder of brain, such as that accompanying intoxication, objects are apt to appear double, as poor Burns says, when reeling home, like a noble spirit self-degraded, and undone by sympathy with vulgar joys—

> "The rising moon began to glow'r
> The distant *Cumnock* hills out owre;
> To count her horns with all my power I set mysel;
> But whether she had three or four I couldna tell."

Thus all nature becomes an amusing confusion to the sensualist.

The dizziness felt on ascending an elevation is a curious evidence of the combined influence of mental state with bodily sensation. It is generally supposed to de-

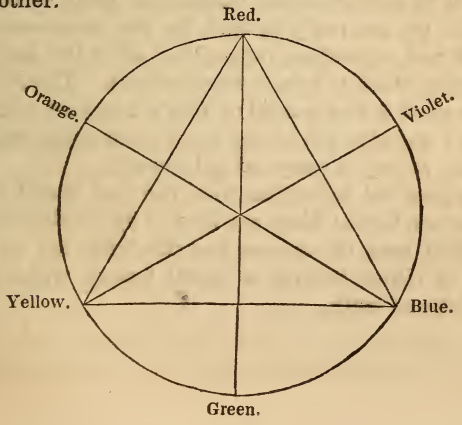
pend entirely on impressions received by the eye; but Wilkinson, in his "Tour to the British Mountains," proves the contrary. A blind man ascended with him to the summit of one of the Cumberland mountains. To this person he described the fearful precipices visible on every hand, but he soon repented of thus exercising his picturesque discourse, for the blind man speedily fell to the ground, overcome with dizziness, and screaming out with apprehension of tumbling down the rocks, into the abyss below. This blind man was Mr. Gough, a highly philosophic and scientific man. The mind was here affected more powerfully than it would have been by the actual sight of what was described, because imagination exaggerated the picture, and enhanced the idea of danger. The same part of the sensorium was affected by the imagined sight, even more than it would have been by the real. The dizziness may perhaps be explained by supposing the mind to possess the power of altering or disturbing the nervous currents by which we are enabled to estimate time, motion, and distance. It is well known that when a man has been accustomed to ascend great heights, he loses the sense of dizziness, which can only arise from the difference in the state of his mind with regard to objects around him; he ceases to attend to them as he did at first, and his apprehension leaves him, as he learns to balance himself, and trust to his hands and feet, under an accommodating muscular action, without the usual nelp from sight, which we know is the medium through which we instinctively preserve our center of gravity in standing and walking.

A certain degree of attention to the use of the eye is essential to visual perception; for if we are profoundly engaged in contemplating ideas, or even in listening to fine sounds, more especially if they awaken our passions, we lose sight of ocular objects, or behold only such as

fancy conjures up. When several objects are presented to the eye at the same time, as in complicated figures with undefined or intricate outlines, a pleasing confusion is the result; and unless we look attentively into the pattern, imagination and memory will supply resemblances and ideas to occupy the place of that which is really before us. This fact was referred to in connection with the vagaries of reverie, but it is one of very extensive application in the arts, and assists us to understand the influence of many natural objects on our minds, since we perceive that a variety of angles and curvilinear figures may be so artfully distributed for ornamental effect, as to afford incessant occupation and enjoyment to all persons whose habits and mental development will allow them properly to observe what is before their eyes. But this, indeed, is far from being quite a common endowment, for the power of observation under correct ideal associations characterizes minds of the highest genius, either for experiment, description, or design. It is, however, on the play of imagination, amid many undefined objects that much of our pleasure depends; and on this principle the infinite diversity of forms and colors, interfering with each other, and yet harmonizing, tends to divert the soul from the visions of care, so apt to haunt the thoughtful, and, by withdrawing the attention from self, to fill it to overflowing with indefinite delights, by suggesting a thousand ideas of life, action, and happiness, with which all but the hopeless involuntarily sympathize. Hence the benefit to the mind of excursions amid green fields, gardens, woods, hills, and dales, or by the great sea, with its living waves and vastness, sparkling with sunbeams. The God of Nature invites the dispirited to meet him amid the beauty of his works, there to be taught, in gentle words, that almighty wisdom has created endless variety, to suit the tastes of innumerable intelligences, and to prove

to man that he is not lost, or left alone to grope his way through everlasting darkness, but everywhere to see evidences that his Maker has set his heart upon him, and would have him to learn from all nature's successive changes and inconceivable minutiæ working together to great and infinite ends, that the God of creation is the God of patience and hope.

Taste for beauty is, then, founded in physiology; at least, it is manifest that our sense of harmony in color and form, as well as in sound, is due to our physical constitution; of course meaning by this the adaptation of organized instruments to the innate faculties of our souls. All who have studied the function of sight, and the action of color on the retina, are well aware that there exists a tendency in the nervous power subservient to vision, to take on complementary states of action. The three simple colors, blue, red, and yellow, being placed at the angles of an equilateral triangle, as in the annexed figure, we see at once what are the complementary colors, and that they result from a mixture of the rays of those primary colors which are next each other.



Here, then, we discover something of the secret cause of our pleasure or displeasure in certain combinations of color. We find those hues are most pleasing to us in which the complementary and contrasting colors are so distributed as to prevent fatigue and confusion in the eye. Hence painters speak of the harmony and disharmony of colors. Few of us trace our enjoyments to their cause, but yet we are accustomed to talk with some degree of freedom of the tastes of our friends and acquaintances; nor can we help observing that coarse minds are apt to betray themselves, not only by *outre* habits of action, and incongruous dress, as regards form, but also by glaring inconsistencies and outrages of good taste in the mixture of colors, with which they fancy they adorn themselves. Orange with blue in all its shades, lilac with yellow, red with green, every lady of taste knows harmonize well together, when neatly arranged; but if she wear a dress of one predominant color, she will take care that it shall be subdued, and somewhat dull. The hideous combination of pure red with blue or yellow is only fit for national standards and the regimentals of soldiers, to show that the harmony of truth is broken, and that we are ready to fight for the maintenance of discord and separation, rather than allow the harmonizing light, which is love, to reign over us. The rainbow in the cloud is the symbol of God's covenant with humanity; and vain will be our attempts at union, until we feel that variety is essential to harmony.

The practical deductions from the facts stated in this chapter are these: ideas are formed by the thinking being which uses the senses, and this being has no right sense of either natural or moral beauty without the knowledge of truth.

CHAPTER XII.

THE COMPENSATING POWER OF THE MIND.

If we doubt the value of pictures, let us ask the deaf man what he thinks of them; if we question the charms of music, we have only to look at "the blind fiddler." Undoubtedly the deaf and the blind respectively enjoy such objects as are appropriate to those senses which they possess, yet, nevertheless, it is probable that in order to a complete appreciation of music, the eye is useful, and the ear not without its value in a due estimation of painting, because both these organs of sense are constituted in relation to measured movements, and the harmony of action, as well as of mere sound and color. To a man who has been blessed with the perfect use of both sight and hearing, and whose taste, both for visual and audible objects, has been properly cultivated, it is certain that melody awakens sentiments which those who have never seen can scarcely conceive; and an expressive and harmonious picture also is productive in the mind of such a person of a delight more exquisite than the born-deaf can apprehend. Milton could never have expected the ecstasies of harmony to have brought *all heaven before his eyes* had he not been accustomed to the visions which pure music awakens; and the sight of a sunny picture, replete with living verdure, sparkling streams, and happy beings, would lose half its power to rouse our sympathies had we never heard the diversified utterances of natural bliss. The perfect education of the eye, for the purpose of search-

ing after objects to gratify the mental appetite, demands those intimations of nicety of feeling which can only be communicated by the voice while under the influence of such feeling; and the associations of living action and beauty are also essential to the fulfillment of all the purposes of harmony. But how cheering is it to observe that the deprivation of a sense, though it may not, as is generally imagined, lead, as a matter of course, to a finer perception through other senses, yet it does not certainly hinder, but rather promotes a fuller and pleasanter occupation of the mind through those senses which remain in use. Hence we find that deaf persons are observant of nice peculiarities in form; they busy themselves about visible minutiæ, take in the particulars of scenes, and are apt, when assisted as they deserve, to experience special delight in such employments as may call forth the exercise of intellect through the medium of the eye. Hence books are their best friends, and the endless volume of nature, full of beauty and illuminated by Heaven, seems to them sufficient to fill the soul with satisfaction forever, because here they learn familiarity with the attributes of a power which they may trust as thoroughly as they can admire. They feel that the same intelligence which attuned the air and the ear to each other, speaks to the soul in the manifest harmony of form and color, since heaven corresponds with earth as distinctly in the visible as in the audible, and goodness and truth are seen as well as heard.

The descriptions of the deaf are generally very minute, but never very poetical; and this arises from the defective association between sights and sounds, on which so much of sentiment and suggestion depends. They are apt to embrace all that is seen, but to omit all the audible, all the voices of life, and hence all their dramas are pantomimes; for alas! all nature is dumb to them, at least as regards vocal expression; but then here again

we rejoice with them; for if their powers of attention be properly cultivated, they certainly learn more readily and more deeply to understand the visible language of action, and the meaning written on the face of every living thing. Hypocrites had, therefore, better avoid the deaf, or their dark souls will be read through their disguises of light, for the deaf are good practical physiognomists, and are always keenly on the watch to discover the meaning of the spirit in every movement of the body, and every feature of the face, for every soul seeks its highest interest in sympathy with others.

The eye is the organ of our instinct for the beautiful and the true as regards personal excellence; therefore, however much we may infer from the tone of voice, as to the existing feeling of a man, we derive our general impression of his character from his appearance, and hence it is that the first sight of a person often leaves such a prepossessing impression, either for or against him, as no subsequent intimacy with him will wholly efface. When the mind is kindled with the generous warmth of sanguine youth, life seems but the realization of romance, and the spirit is then most ready, with unsuspicious hope, to love with all the heart any individual who visibly represents any approximation to the beau ideal which every human heart forms for itself; hence an indomitable love at first sight is, perhaps, better understood by the deaf than by those who can correct the visions of eyesight by remembering the admonitory voices of proclaimed woes, although these, indeed, too truly are, in many cases, unavailing to check the impulses of unwarranted affection, for after all, our loves are always stronger than our fears, and humanity is proved to be not utterly lost, since it still confides in all it believes to be beautiful.

Deformity is always painful to an amiable mind, and a face in which the hideousness of malignant passion

predominates is well called frightful. It is intended to warn us to flee from evil in its evident consequence. But let us not mistake the lineaments of misery for those of malignity. Many a repulsive face speaks only of the sufferings of a beautiful soul conscious of being ill placed. By kindness we may make the most wretched beautiful. A sight of pure charity soothes the most perturbed and weary spirit, and animates the languid and haggard body with a new life, the full development and expression of which is visible happiness—that is, the amiability of a mind reconciled to Heaven by beholding and feeling its light. Thus it is that the human soul finds its own value, and follows its affinity for proper fellowship until it finds a place of peace, and a society whose only law is indwelling love, because the whole being of each *there* is transformed into the likeness of what each adores—God manifest. But woe waits the soul that is obliged to dwell where sights and expressions of aversion may become so familiar as to be tolerated, and perhaps in some sort maliciously enjoyed. It is thus that humanity loses its character, and dissolute minds learn to mock at misery by turning the causes and consequences of iniquity into occasions of ridicule and mad merriment. Surely the chambers of imagery in Pandemonium are filled with caricature and distortion, such as demons teach men to publish for the amusement of the godless, who find their perennial fountain of fun in the disorders of society, and call the absence of all loveliness and charity, wit and good-humor. Pure beauty and light doubtless mingle in the smiles of heaven's tranquil inhabitants, but hideous grimaces and mockeries are just visible in the lurid gloom of perdition, where every heart burns with a hatred that can well express itself in laughter such as Goëthe heard when he thought of Mephistopheles.

Almost every spontaneous engagement of the mind is

pleasurable. Creative might is surely pure benevolence; for to use the senses in response to the desire of the mind for new sensation is, of course, soon to meet enjoyment in the perception of some property of matter always interesting to the soul, because the properties of matter were determined by the Creator on purpose to gratify the internal faculties of his intelligent creatures. Consciousness, therefore, as a rule, is always agreeable; at least, this is so far felt to be true, that the idea of ceasing to be conscious of what we here enjoy, is itself the chief cause of the darkness with which fancy invests the notion called death. How beautiful and cheering is the fact that one born blind, for instance, drinks in the sweet music of friendly speech with double relish, and with a passionate love always alive to the harmony of social affections and joy. Even though, to show forth the glory of God as the Restorer, a human soul is sometimes sent into this breathing world so imperfectly accommodated as neither to be able to hear nor see, yet that soul proves its capacity for everlasting happiness and knowledge by the invention of enjoyments in the many tangible properties of things within his reach, and thus finds numerous pleasures which those more fully endowed can scarcely imagine. But our joys are all comparative. The child is as happy as he can hold with his few ideas, and Laura Bridgman, James Mitchell, and others without sight, without hearing, were generally full of gladness, even to an overflowing degree of rapture, in exercising the sense of touch alone. Indeed, it does not appear how any being can be unhappy, except either from outward violence, or from immorality, or the abuse of those passions by which human nature is set in motion, and the interests of society are sustained; for the world of each individual must be blessed in itself, until one self interferes with another, and assumes a right which God does not authorize.

How diligently and successfully James Mitchell hunted for new sensations to satisfy the appetites and instincts of his soul, is fully shown in the simple fact that he found a lasting delight in striking a key against his teeth. Thus, probably, he excited the auditory nerve by a peculiar percussion, which, being propagated through the jaws and the bony structure of the internal ear, presented him with new ideas concerning the properties of matter, and agitated the sensorium with measured impulses, doubtless as gratifying to him, who knew no nearer approach to music, as the exquisite eloquence of his own violin was to Paganini. Successive impressions are successive pleasures, but the human soul can enjoy but one thing at a time; therefore, enlargement of knowledge is not necessarily an enlargement of capacity for happiness. The temper of the mind is in this respect more important than its scope; yet we are not intended to be satisfied with the present, but to be roused by what we experience to seek for what we hope; because that degree of contentment which the happiest, most relying, and most religious mind may here know, is kept alive by expectation that still points to a coming period, when our capacity for bliss shall be equal to our knowledge, and that in consequence of our intellect then being no less pure in its purposes and pursuits than vast in its power.

But we have turned a little aside from our subject to express ideas suggested by it, and which arose from reflecting on Dr. Gordon's statement of the case of James Mitchell, particularly this passage :—"When a bunch of keys was given to him, he seized them with great avidity, and tried each separately, by suspending it loosely between two of his fingers, so as to allow it to vibrate freely; and after tinkling them all against his teeth, he selected one from the others, the sound of which seemed to please him most. This was one of his most favorite amusements, and it was surprising how long it would

arrest his attention, and with what eagerness he would on all occasions renew it. Mr. (now Lord Brougham) having observed this circumstance, brought to him a musical snuff box, and placed it between his teeth. This seemed not only to excite his wonder, but to afford him exquisite delight; and his father and his sister, who were present, remarked that they had never seen him so much interested on any former occasion. While the instrument continued to play, he kept it closely between his teeth; and when the airs were ended, he continued to hold the box to his mouth, and to examine it minutely with his fingers, expressing by his gestures and his countenance great curiosity."

That a person who may have long enjoyed the vast blessings of hearing and sight, and then is deprived of them, is not utterly stripped of means of happiness, may be seen in the remarkable case of a lady rendered blind and deaf by small-pox, and a portion of whose subsequent history is related in the "Philosophical Transactions" (1758). She became not only a blind, deaf mute, but was subject to paroxysms of extreme suffering from disease of the throat, which, for a long period, almost deprived her of the power of swallowing. This case is extraordinary, from the well ascertained fact, that under these circumstances her senses of feeling and smelling were so wonderfully refined that she could at length distinguish colors by their aid alone. She distinguished her friends by an exquisite exaltation of the sense of smell, and could tell by touch even the different shades of the same color which might enter into their dresses: thus she distinguished pink from red. By attentively touching the figures on embroidery, she could state their respective colors, as well as their outlines. The instantaneous lightning did not startle her, the divine voice of thunder did not move her; "the sun to her was dark, and silent as the moon;" but light was in her soul. A

world of bright visions lived before her mental eyesight, and doubtless she enjoyed a paradise of her own, in which her spirit wandered at will, like Milton, who wisely says, in writing to a friend (Phalaris), "Why should not each of us acquiesce in the reflection, that he derives the benefit of sight, not from his eyes alone, but from the guidance and providence of the Supreme Being? While he looks out and provides for me as he does, and leads me about with his hand through the paths of life, I willingly surrender my own faculty of vision, in conformity to his good pleasure, with a heart strong and steadfast." It is worthy of note, that in the dark and silent solitude in which the lady just alluded to was imprisoned, she sought and found appropriate solace in the sense of touch. There was a neat precision in her needlework, which proved that she engaged in it *con amore*, and with a peculiar pleasure, from the distinct apprehension of tangible order, and even with a feeling of visible beauty in design and execution. Of course, this pleasure was associated with the consciousness of pleasing others also, who would be surprised to see that she could accomplish what they could not equal even with the help of sight. Her writing, too, was equally exact; the characters were very pretty, the lines, even the letters, equidistant from each other. Thus her mind adopted a mode of occupation in which the love of order, and, indeed, every faculty that could express itself with the few means within her reach, might find full employment. Hence, even when bodily pain prevented her soul from finding an escape out of constant night in the fancied vision of dreams, she was accustomed to sit up in bed, to soothe her nerves and divert her mind by writing and needlework; for thus she not only diminished nervous irritability by muscular action, but sustained her heart by enjoying the strongest of passions—the love of approbation.

The store of ideas dwelling in the memory, and multiplying there by many combinations, even in a soul thus comparatively shut out from fellowship, must still be a means of constant solace; but if, amid the truthful beauties of a remembered world, the crowning thought has been imparted,—namely, that the Maker of the soul and all things is, indeed, the everlasting patron and parent of the desiring spirit—then the gate of heaven is opened, and faith begins already to live amid the glories of the inner temple, where shines the uncreated Light, and where sunbeams are not needed.

The history of individuals deprived either of sight or of hearing, presents us with one fact of great interest and practical importance—namely, that the necessity of employing the remaining sense with more nicety of discrimination, caused a habit of peculiar attention to things within its range. The effect of this close observation, both to details and to generals, in the deaf, for instance, is a remarkable distinctness of apprehension, clearness of memory, and hence facility of description, as well as, in cultivated individuals, a graceful force of diction, from the study of the best models, in language and the construction of sentences. This may be well illustrated by reference to the works of two admirable living authors, Miss Martineau and Dr. Kitto. The writings of both afford good examples of that comprehensiveness of attention to facts which characterizes true genius, and confers on it that facility and readiness of association to which its copiousness seems to be entirely due. Dr. Kitto says of himself: "My mind retains a most distinct and minute impression of every circumstance in which, at the time of occurrence, I felt the slightest degree of interest; of every person whom I have at any time, during the last twenty-eight years, regarded with more than casual observation; and of every scene upon which, during frequent and long continued change of

place, I bestowed more than the most cursory notice. It is something to say this, under the immense variety of new objects which, during a long period of time, were constantly passing before my eyes, like the moving panoramas of some London exhibitions. And it should be understood, that what I mean by 'cursory observation' is, the seeing of a thing without looking at it; and, therefore, that I retain a clear impression or image of every thing at which I ever looked, although the coloring of that impression is necessarily vivid in proportion to the degree of interest with which the object was regarded. I find this faculty of much use and solace to me. By its aid I can live again, at will, in the midst of any scene or circumstances by which I have been once surrounded. By a voluntary act of mind, I can in a moment conjure up the whole of any one out of the innumerable scenes in which the slightest interest has at any time been felt by me."

The strong memory of the blind is shown in their generally exact recollection of voices, even after long intervals, and is, perhaps, peculiarly exhibited in their retention of melodies. A good instance of verbal memory in a blind man is that of James Wilson, who, from being a village fiddler, with the help of a boy to read to him, became attached to books, and afterward was creditably known as an author. His talent for listening aided him to good purpose, in enabling him to edify his neighbors with the minutest details of news, at a time when political intelligence was of the most exciting and important kind—during the French revolution. He knew the names, stations, and commanders of almost all the ships in the navy, and was also acquainted with the number, facing, and name of every regiment in the army, according to the respective towns, cities, or shires from which they were raised. This accomplishment soon made him the living army and navy chronicler for the poor of the

neighborhood who had relations in either branch of the service, whom he was also capable of informing of all the general news. The following anecdote, related by himself, shows the strength of his memory at this period:

"Being invited by a friend to spend an evening at his house, I had scarcely sat down, when three gentlemen entered. The conversation turned upon the news of the day. I was requested by my friend to repeat the names of as many of the ships of the British navy as I could recollect, telling me that he had a particular reason for the request. I commenced, and my friend marked them down as I went along, until I had repeated six hundred and twenty, when he stopped me, saying I had gone far enough. The cause of his request was then explained. One of the gentlemen had wagered a supper that I could not name five hundred; he, however, expressed himself highly pleased at his loss, having been, as he acknowledged, highly entertained by the experiment."

Though man's infirmity is stamped upon his body, and by the conditions of his birth he stoops to degradation, like a slave born to labor in chains, yet his spirit struggles in this bondage, and, with the far-seeing faculty of faith, looks forward, quietly confiding in the rectifying purposes of Almighty Love. And even now, while groaning under his burden—his reason being enlightened by a message from his God—he feels the persuasion of his coming triumph so thoroughly in his whole being, that a song of grateful joy seems ready at once to burst from his full heart. Thus, as long as the Maker of soul and body permits a man to be conscious of the sufferings of the body, he enables him to rise superior to them, and being filled by lofty determination, in reliance upon divine favor, the feeble sufferer still enjoys the sufficiency of a will that is one with love, so that he finds infirmity and pain are no real impediments to his ultimate wishes, but rather incentives and occasions to demonstrate the might of

a man that takes hold of God, and climbs, not creeps, toward heaven upon his hands and knees. No! happiness is not a mere bodily state. I have now before my eye the smiling face of one who for eight years has been totally blind, incapable of sitting, without the use of the legs, subjected to violent pain, and frequently convulsed; yet, whenever consciousness returns, there is the ready smile, with the happy word. Why is this? *I know that my Redeemer liveth*, is the sufferer's grand secret.

These facts are here inserted, because they are especially worthy of notice, at least by the youthful reader, as they demonstrate that useful memory is mainly due to the degree of distinct and careful attention given to the objects of sense for the express purpose of acquiring and retaining a knowledge of them. We must will to observe minutely, if we would learn truths, and be qualified distinctly to impart them to other minds. And we should consider that this exact attention influences both imagination and judgment, because the power of reproducing in our minds the images of past impressions, as well as that of comparing, and thus estimating ideas, depends on that proper exercise of our discriminating faculties, which a proper employment of attention necessarily implies. In short, our senses are the instruments of our souls, and if we use them in a bungling manner, we are sure that our best accomplishments will be but confusion.

Take care, therefore, to obtain information that may guide you to the right use of your senses, for they may be as acute as those of a wild man of the woods, all alive to the impressions of nature, and yet you may give no more attention to them than would suffice to satisfy the faculties of a baboon, instead of affording your reason any perception of the true meaning of things around you. *With all your gettings, get understanding*, says Solomon; that is, *learn to observe*, for without this accomplishment, the five avenues of wisdom might as well

have been closed, since they will only serve to enslave the soul, and bind it with fetters, to be loosed, if at all, only by death. When you gaze up into heaven, on a starlight night, what do you see? Stars, stars, stars. Yes; but is that all? He who has learned to employ his eyesight, sees order where you see confusion; his mind enters into his organs of vision, and enables them to detect differences which the uncultivated eye entirely overlooks; and moreover, a man with his mental eyesight, where another observes only gleaming sparkles of light, beholds worlds moving together in mutual harmony and visibly regulated by laws, which prove that the same mind which rules the elements of earth, and distributes the rays of the sun in such a manner that each small sphere of water in the descending shower shall analyze its given portion of light, so that the rainbow shall embrace the hills, and bring to man's memory his Maker's covenant. Thus, by attentively applying our senses, we learn analogy, and understand that Omnipotence is ever present, reigning alike in the minute and the magnificent of his infinite universe, and as easily managing worlds as he does the dew-drops, each strung upon its shred of morning light. Now, reader, what have you learned of order and beauty, so that they may rest in your soul as part and parcel of its consciousness forever? What have "birds, and butterflies, and flowers" conveyed to your mind concerning Him who arrayed them in their surpassing glory? Do you think your Heavenly Father careth not for you? Then look a little more closely into the meek and tender beauties about you, lest you should be no more of a philosopher than Peter Bell:—

> "A primrose by the water's brim,
> A yellow primrose was to him,
> And it was nothing more."

And yet it is a keen preacher, and quietly upbraids us

all with want of faith in our Maker and Preserver. What of the harmony of heaven do *you* realize by listening to the "linked sweetness" of nature's music? Perhaps you are too happy to deliberate—you neither look to the past nor the future, being satisfied with the present. Enviable state! If indeed you are innocent, you may go on thoughtlessly enjoying the ceaseless bounties of Providence like an unreflecting child; you are safe. But you are *not holy*, and therefore your instincts will not conduct you forever onward to new happiness as surely as the intuition of an angel fits him for the enjoyment of all heaven. You are depraved, and therefore you must reflect, and gather instruction from the past, to lead your understanding onward to the future. But if you do not earnestly attend, what will be your past, but a mere chaos? You must pause upon impression, and compare, and judge, and not be satisfied with the knowledge that may happen to be forced upon you; but as the works of God are *sought out* by those who delight in them, so you, in order to be permanently wise, are required to use your senses with a full purpose always in view; expecting to find objects so exquisitely adapted to each of them, that you may dwell on the confines of a spiritual world through all and either of them. But know, the time is near when you shall have no pleasure in sense, and when the truths of indwelling knowledge, the mental wealth derived only from industrious attention, can alone furnish you with objects to sustain your spirits, by reminding you of the attributes of Him who will never forsake you; therefore, even if you have but one sense left, you may yet learn to use it aright; and you will find that through it you may become intimate at length, by association, suggestion, imagination, and sympathy, with all the wonders of creation, since there is not a tint, nor form, nor scent, nor sound, nor tangible beauty in universal nature, but must

find some correspondent condition or quality in your soul, which shall be awakened through that one sense, by your properly and wisely employing it. If, then, you have ears, *listen;* if eyes, *look;* and if, like Laura Bridgman, you have only feeling left, still live at large through that, and, like her, exist lovingly, trustfully, hopefully, happily, because every kind of knowledge brings the soul into fellowship with humanity and with God.

CHAPTER XIII.

TEMPERAMENTS.

The body is constituted by the union of the circulatory, respiratory, assimilative, absorbent, secerning, muscular, and nervous systems, which all act together under laws, and with apparatus peculiar to each, and equally marvelous in all, for the purpose of rearing up and maintaining a complication of organized machinery pervaded and preserved by one life, and actuated by one soul. The failure of either of these systems arrests the action of the whole; for although they are distinct in parts and in power, they are indivisible in operation and mutual dependence, but yet either may, to a certain extent, predominate, and it is this predominance which, in fact, confers peculiarity of temperament. Galen was the first to classify temperaments, but he founded his division on error, according to the ancient notion of the four elements; and as the Greek philosophers taught that air, water, fire, and earth possessed corresponding qualities of heat, cold, dryness, and moisture, so the supposed components of the human body—blood, phlegm, bile, and black bile—were represented as giving rise to the corresponding sanguine, phlegmatic, choleric, and melancholic temperaments. Such distinctions, however, do not exist in nature, and temperaments are as diversified as the state and circumstances of each body. Yet a certain preponderance in either of the systems may be manifest; and as the fitness of the body for the uses of

the mind mainly depends upon their proper adjustment, it will be more correct to characterize temperaments by any marked excess in the relative development of either of those systems. In order, however, to conform to usage in this chapter, the familiar terms will be adopted with the understanding that the *sanguine* temperament is connected with a free circulation of blood, and a corresponding respiration; the *phlegmatic*, or *lymphatic*, with vigor of the digestive functions, and tardiness in other respects; the *bilious*, or more properly the *fibrous*, with firmness of muscle and general energy; and the *melancholic*, with deficiency of assimilative vigor and disturbed or inordinate activity of the brain and nervous system.

Temperament relates fully as much to the mind as to the body, and the loose mass that has been written on this subject would have been vastly more useful if the writers had more faithfully remembered the fact, that there is a spirit in man, and that by the breath of the Almighty he became a living soul. Every healthy child is sanguine; every thoughtful man is nervous; the former enjoys the freshness of vigorous life, with Hope and Fun as his playfellows, while the latter, stirred by the strong motives which the tribulation of true knowledge brings with it, is mentally active and energetic. The lymphatic body does not always belong to a sleepy soul, nor a hasty spirit to a fibrous constitution. It is true, indeed, that an indulged stomach is apt to produce a heaviness of brain, and the man who freely uses his lungs in healthful exercise will enjoy a better circulation of blood and a freer spirit than the indolent and sottish. The brain may be oppressed by that which should nourish its power, and the abundant aliment that would administer muscular strength to those who use it, will only contribute grossness to the inactive. But yet a man may be as dry as an Arab, and as free from fat as a

greyhound, and still be more disposed to think than to hunt. Bodily temperament influences the operations of the human mind only as far as it interferes with the convenient exercise of the will, but the habit of mind must depend rather on mental associations than on the fitness of a man's countenance to express his passions. Individuals who are not excited by pain to exert themselves are not idle, but diseased, and the state of the body in such persons presents impediments to action which can be more easily submitted to than overcome. The moral state of the mind modifies the influence of temperament, and the man accustomed to assert the rights of self-hood by a commanding intellect, stimulated by high moral training, will manifest his nobility in spite of an incommodious body. The state of the passions rather than his complexion determines his actions, and the struggles of his soul will form his visible character, whatever be the color of his hair, or the dimensions of his limbs. The lymphatic man is as capable of anger as the fibrous, but while the latter fiercely vents his feelings in his muscles, the former palpitates at heart, and smothers his emotions with a sigh. Many a phlegmatic body has concealed an irascible diposition, and many a choleric countenance has been fashioned by mental agony and self-control. Although we can by no means read a man's disposition by the quantity and quality of his flesh, nevertheless his mental habit and aptitude for intellectual exertion are usually impressed upon his features and his form. Whether he be phlegmatic, sanguine, nervous, or bilious, we shall, for the most part, be able at a glance to decide whether he have been accustomed to master his passions by the use of his reason.

One man is less excitable than another, not because his ideas are fewer, his temptations feebler, or his thoughts less rapid, but merely because, his affections being better

trained, he does not hastily associate all that passes in his mind with a feeling of his bodily self. But every idea is emotional with savages, with young children, and with fools, because they have not been subjected to moral restraints, and taught to resist impulse for the sake of spiritual advantage. It is only by forethought, or by intently aiming at a specific end, to the attainment of which lesser objects are regarded as at best but subservient, that a man endures patiently and with undiverted purpose. If his ambition thus absorb all minor passions, he will be phlegmatic, because he will conceal his feelings, and keep himself free from the infection of the transports of others by unnatural violence to his own heart. But does this power of self-possession for ulterior purposes altogether resolve itself into a certain proportion between the brain and the belly, or the blood and the muscles and absorbents? No. Napoleon was of the same temper of mind when a slim lieutenant at Valance, as when he fattened at Elba, or as when the vulture preyed upon his heart at St. Helena. Faith rules wherever it dwells, and enables a man calmly to keep the even tenor of his way, whatever be the temperament of his fluids and solids, because it has a living power that grows with the demand upon it.

Those who are marked by habitual self-control are either possessed by hypocrisy or by great ideas; they are either canting to serve some present purpose, or the vastness of their vision into the future prevents their being much moved by any thing present; thus, the hypocrite lives on scraps only for time, while the Christian's heart is in eternity. High thoughts preserve us from low desires, in spite of temperament; but unless we love some object more than our own ease, we are the slaves of our own bodies. If we enjoy not the delights of intellectual and affectionate sociality, we must be either abstruse saints or groveling brutes. We must seek

pleasure somewhere and somehow; if not in holy excellence, then we must say, like Milton's Satan,

"Evil, be thou my good!"

Where mind does not govern, sense is obeyed; and when we cease to struggle for self-mastery, we sink into our imperfect instincts with a very inferior brutalism. Then we shall be tardigrade or active according to the demands of appetite, and shall luxuriate like swine grubbing for roots, or hunt like beasts of prey, just in proportion to the supply of food. Then the temper will be in keeping with the condition of the body, and sensation will master the mind. Thus the man who is governed by his animal propensities will grow mischievous in his sulky irritation, like a wild elephant or buffalo disappointed of enjoyment, while he who aims higher will increase his might by struggling on to triumph over his most imperious passions.

The world is divisible into two classes: those whose motives are derived from the body, *carnal;* and those who alone practice morality, *the spiritual.* It is because savages and the like are obedient to bodily temperament that morals, properly speaking, are not known among them. Those who doubt this may emigrate to the heart of New Zealand. There they will see that cruelty, lust, and fear are the only known gods. The supreme they adore is the spirit of evil; he *is* supreme over them. Hence superstition binds them in fetters of fire; darkness is terror, and every unusual sound dismay, because each man is afraid to trust his fellow, since he reads his character in his own heart. Thus self is opposed to self, hateful and hating. Hence the state of man without revelation proves that morality is derived from Heaven; the law of right is from above, the law of might is native to earth; and the doctrine of pure love, such as we find portrayed in the luminous words

of the Bible, proves itself to be an emanation of the Divine Mind; since no human being, left to learn only from his own natural feelings, or from the conduct of his equally unenlightened brother, would ever have conceived the idea of a power that could banish fear. This power is the regenerative truth, the entrance of which is light and liberty to man's spirit; because God has thus demonstrated his name and nature through the Word made flesh to dwell among us. It is faith in this truth that at once and forever makes a man a new creature, by altering the spirit of his mind, and modeling it afresh in the image of his Maker.

Christians have the highest motives and the highest desires to use the body well, and therefore they ought to learn physiology enough to enable them to modify temperament so as to offer the least impediment to the working of their principles. No doubt a literal obedience to the laws of the New Testament would answer all purposes; but at present Christians do not feel quite confident in following them explicitly, because they do not quite perceive how exactly they are suited to the state of humanity. Self-crucifixion is the theory, but not generally the practice; probably, because the relation of the individual to his body is not sufficiently understood. Christians, indeed, always begin in the right way to attain the end, for the desires of the mind must be elevated before the physical tendencies can be rendered amenable to the behests of the spirit. With a pure volition, and a heart turned heavenward, the chief difficulty is overcome; since it is a fact, as before shown, that the direction of the will more determines the state of the body than that of the body the will; for as is our will, so is our love, and that is stronger than death.

The object of this work is to advance information, from which the reader may draw inferences for his own conduct, without specific rules for individuals. It is by

enlightened reason that we are correctly guided; but each of us must form his judgment for himself, or else personal responsibility is at an end, and the soul becomes a ready slave to any presuming teacher.

The different temperaments, however, demand very different regimens, and therefore a few words may properly be devoted to what is appropriate to each. The facts and observations dispersed through this volume, in a general way, show the importance of bodily management; but it is manifest that particular rules are required in particular cases. The *phlegmatic* or *lymphatic* constitution is connected with extensive and powerful digestive organs, and therefore the danger is from inordinate appetite. It demands moderate stimulation, steady exercise, brief sleep, occasional fasting, little drink, and strong food. The *choleric* (bilious or fibrous) man has too active a heart; he should aim at obtaining bland blood and a quiet state of the nerves. Substances that irritate the stomach and excite the heart cause such characters to become outrageous; and if they indulge in the abundant use of animal food, stimulant liquors, and spices, it is as well to reason with a whirlwind or a drunkard, as to persuade them against their inclination. They must, then, be treated like madmen, for nothing will check the intensity raging within them but forcible restraint, abstinence, and solitude. The *sanguine* man is hurried on by the warmth and fullness of his heart to form attachments and make promises which prudence and providence forbid him to fulfill; hence he is regarded as inconstant and inconsistent, for his errors are not always looked on with the charitable indulgence with which he regards those of others. He requires especial management, for he is in the greater danger because "his failings lean to virtue's side." The regimen of the choleric man is not inappropriate to him, for although he is sometimes highly elated, and at other

times equally dejected, his characteristic is want of self-control. Therefore extreme moderation, using only three meals a-day, without stimulants, is best for him. He needs a keeper, and a wise friend is essential to his safety; therefore let him deserve to obtain one. Happily this kind improves by time and experience. Probably the diet and discipline of a well conducted union-house would not be amiss to such a temperament, for his flighty hopes would have their wings clipped, his appetences would be restrained, and affectionate fits and wayward impulses be checked, by the magnetic touch of a charity sufficiently cold and decided. Steady employment, enforced regularity, a proper attachment, will be more useful to the sanguine youth than any strictness of dietary. The *nervous* have a predominance of brain. They should seek society, and employ themselves among the beautiful varieties of nature, not merely for the treasuring up of thoughts, but for the improvement of their senses, and the development of their muscles. Their blood is apt to be disordered, because their digestive functions suffer from the exhaustion of the nerves, induced by study and excessive sensibility; therefore their diet should be light and moderate, and every thing should be done with a view to preserving the proper balance between thought and action, muscle and mind. The *nervous*, the *melancholic*, and the *bilious*, are near akin to each other, and are often met with in the same person, as a confirmed dyspeptic, or still more miserable hypochondriac. In such, the whole being is alive to pain. All the universe seems inconvenient to the melancholy man, and whether his gloomy sensibility arise from a morbid body or a mistaken view of Divine Providence, his self-complacency is alike disturbed, and he feels his individuality not as faith dictates, but as his senses inform him, so that he is oppressed by the weight of his own helplessness, instead of casting him-

self with all his cares upon the Almighty. Every man is liable to this worst of all maladies when his body fails, or he has unnaturally limited his attention; and the only remedy for it is found in the drawing out of the affections so as to induce bodily activity, or in that assurance of soul which looks for sufficiency only in Him who brought each of us into existence for his own good pleasure, and orders our circumstances so as ultimately to prove that Omnipotence can not be unkind, The will that is not resigned to God is always impatient of impediment, because it knows no law above itself; so that, after all, the end of our argument is the same as the beginning—namely, that true happiness, or health of soul, is simply what, in the New Testament, is called salvation, and which is begun in every spirit that can look forward with a steadfast eye, and say, *Thy will be done.*

When thinking of dyspepsia and melancholy, who can forget poor Cowper? The vast black wall which he represented as visibly erected between himself and heaven, was some impediment to the right action of his brain, in relation both to thought and sight. His disease was kept up by monotony and medicine. There were none but quackish attempts at cure, except while under the care of Dr. Cotton, whose treatment for a time restored him, and whose advice, if properly followed out, would probably have been attended with permanent advantage. When comparison and association were so far unobscured by a depraved stomach, bad blood, and an irritable brain, that the poet could exercise his judgment and reason on premises before him, then the holy truth which he loved immediately triumphed, but, as disease advanced, to fix his attention through his senses was only to beget confusion, so that the visions of his slumber were often more reasonable than his waking thoughts. Although the process of digestion does not depend on

the brain—for a creature without a brain may digest well—yet a painful state of mind disorders every function of the body. Now, as the brain is the organic medium between the vital organs and the mind, of course if the brain becomes sympathetically disordered by disease, it prevents the happy manifestation of mind. But this happens either to the extent of rendering the individual perfectly imbecile and idiotic, or else as an impediment to mental action, of which the individual is conscious. Now, in the latter case, the instability of temper, and restlessness of disposition, will be no further evinced than as sources of complaint, as long as the mind is sustained by faith in the love and power of God. But we see that those who are without moral and religious principles are, unless they are utterly prostrated, always ill tempered when out of health. A feeling of inconvenience, when not associated by reason with the propriety of submission, of course excites resistance. Thus, a palsied man may be quite angry at being dissuaded from some purpose in his mind, but the instant he remembers his unfitness for exertion, his anger is gone. When Sir Walter Scott, palsied by tumor of the brain, was impelled by thought and habit to his writing-desk, the opposition of his family offended him, but on attempting to write, he felt his inability, and burst into tears.

"Quod animi mores temperamenta sequantur" is but an excuse for indulgence in animal desire, and scarcely becoming, even to the creed of a Hottentot; although, doubtless, complacently adopted by many a decent philosopher. The feeblest bodies are generally the most sensitive, but sensibility destroys not moral perception, nor moral purpose; for a man may be as tremulous as a jelly from debility, but yet his faith may be too strong to be conquered by weakness. He may be ready to shrink away, like a worm into the earth, at the sound of a footstep, and find "the human face divine" too ex-

citing, and the voice of his beloved scarcely gentle enough for his brain, and yet with a holy pertinacity prefer the rack to recantation. There is no heroism in blood-vessels and nerves; but a spirit possessed by reliance on God, though animating the gentlest heart, yet laughs at the flames, and commits the body to their embrace with a song of triumph. "So be it, Lord—so be it," said Anne Askew. The spirit may be willing and the flesh weak, but *there is* the willing spirit still. Hence the Christian's paradoxical experience; and hence, too, inconsistency is so often mistaken for hypocrisy, by those who have not been new-born out of nature with the weight of a felt eternity upon them. The moral law of a heathen will serve for a skeptic, but the man who looks into the two everlastings, death and life, sees no safety in middle courses.

Every healthy giant ought to be a hero, according to the theory that represents the moral character as the result of physical structure; but we know that "many a good tall fellow" is only a coward, in spite of his large heart. A brutal impulse may sometimes get the better of his discretion; but if this be courage, then a game-cock is more of a hero than is Wellington. The panoplied Goliah trusted in his armor, and laughed at the stripling with his sling. But which was the hero? No! spirits are not firm in strength of muscle, but in mighty principle; and the soul must be taught to depend on some power above itself, or its might readily degenerates into desperation. Thus the veriest coward becomes daring when he has done with his calculations of escape; and the provost is often more persuasive than the general, or even the hope of prize-money. We oftener hesitate from the state of our affections than from the state of our fibers, and our defective attention to duty depends rather on our motives than on our muscles. But to make morality spring from the circulation in the capil-

laries, as some men teach, is to reduce man to an accidental demon, whose prowess may emulate either the majesty of Milton's Satan, or the little mischievous pranks of Shakspeare's Puck, just according to the power of the stomach to digest.

Conscience *does* make cowards of us all, but yet many have met death face to face without fear, calmly, eye to eye, not blinded by the impetuosity of their blood. Was it because the relative proportions of their brain were altered, or some new organ developed? No such thing. Neither temperament, age, sex, nor condition determined it. Persons at all periods of life, and in all varieties of bodily form and habit, have coolly conquered the last enemy, not by dint of physical training, but by mental conviction, by change of motive, by change of thoughts, by the knowledge of new relationship between their Maker and themselves. They have seen life and immortality brought to light, and with united voice exulted over the last and mightiest enemy:

"O Grave, where is thy victory?
O Death, where is thy sting?"

CHAPTER XIV.

THE INFLUENCE OF THE BLOOD ON MENTAL ACTION.

Probably temperament is really more dependent on the condition of the circulation and the chemical agencies involved in it than on any other vital peculiarity. But yet, of course, we can not overlook the fact that development of form greatly modifies the operation of the mind, for who can think of the difference between an athletic and a puny body without perceiving how unfit they are for similar purposes; this unfitness undoubtedly is felt to the full by the individual spirits by which they are respectively animated and employed. We shall not look among voluntary tailors for brawny, muscular, and sanguine men, nor expect to find among the grenadiers one who would prefer the gentle duties of a man-milliner. Then again, if we reflect on the peculiarities in body which distinguish the sexes, we can not but discover corresponding manifestations of taste and disposition; for such is the order of nature, that the mind takes its cast from its accommodations, and seeks to be exercised in the most appropriate manner, or, at least, in that way which seems to afford it most promise of enjoyment. For the purpose of obtaining a clearer insight into temperament and its consequences, we will look more closely into a few facts illustrative of the influence of the sanguineous circulation on the action of the mind.

According to the analyses of Lecanu, it appears that temperament has a marked influence on the character of the blood. That of lymphatic persons is poorer in solid

constituents and blood-corpuscles than that of sanguineous persons. The same authority also states that at successive periods of life the relative proportion of constituents varies, and that blood-corpuscles, with which vital energy seems mainly connected, are not so abundant in the earlier periods of life as at maturity, after which there is a progressive decrease in the solid part of this fluid, and that after the age of forty or fifty the increase of *cholesterin* in the blood is very decided. Sex also modifies the blood; that of the female being more watery than that of the male. Disease, of course, alters these conditions, but the blood best suited for one state of the nervous system would be unfit for another, and therefore the nervous power greatly modifies the action of the heart, and the condition of the circulating fluid. Mental state also operates powerfully in controlling the force of the circulation, so much so, indeed, that by appropriate employments of mind the prominent peculiarity of a man's temperament may be entirely altered. The blood affords the stimulus and nutriment of the brain; the working of this organ must, therefore, depend on the quality and quantity of this fluid distributed to it. Still, lest this observation should mislead the reader, it will be well at once to remark, that the manner in which the mind works with brain is not in the least understood, but it appears to be demonstrated that the direction of thought is determined rather by the habits of the individual in the use of his senses, than by the state of the blood and the condition of the brain, for the law of association is almost universal in its dominion over mental operations. Yet the rapidity or intensity of the mind, in whatever direction it may be exerted, seems chiefly to be regulated by the force of the circulation in the brain; and the probability of this we can not fail to perceive, if we consider what has been previously stated concerning the currents of action in the brain, together

with its connection with the organs of sense, and its sympathy with every function as established by nervous correspondence. The constancy of this sympathy and connection is maintained by the circulation of blood-power and nervous influence. The study of the associated actions of the brain with other organs of the body, though too abstruse and elaborate a subject to be now enlarged on, would greatly assist us in endeavoring to comprehend the causes of mental enjoyment and disturbance, for it is evident that different portions of brain are directly associated in action with different parts of the body, and especially with the different organs of sense. In this respect the brain may be advantageously regarded as made up of a variety of parts, which, although constituting but one organ, yet subserve distinct purposes. Hence the supply of blood in the brain may be subject to partial irregularity, either from undue use of other parts of the body, or by the direct action of the mind on different portions of brain unequally. Certain phrenologists endeavor to account for all varieties of mental manifestation, whether asleep or awake, by supposing certain parts of the brain to remain dormant while others become active. To a certain extent they are justified in their conclusions by the testimony of facts, but undoubtedly not to the extent which some assert, when they would have us conclude that different sorts of thoughts are secreted, and separated from the blood by the brain, just as different substances are produced by the glands. This is physiology running wild, for it represents organization not as instrumental, but as creative, and that not of absolute existences, but of nonentities, since, as already observed, thoughts and thinkers must perish together if *both* are *only* brain-work destroyed by death. But the soul is the proper excitant of the brain; yet as warmth, light, moisture, nutriment, and oxygen are essential to vital development, so all these, in connection

with appropriate organs, are requisite in this life to the manifest operation of the mind. In order to sensation, there must, of course, exist a suitable vehicle of impression, and therefore, too, in order to thinking, sensation appeals to the will of the soul, that thus a demand may be made by it upon the brain, and hence upon the heart, for the materials to put the nervous and muscular system into use, since, as regards our present existence, the proper end of all thinking is bodily action. From this cause, thinking, willing, acting, cause determination of blood to the head, which can be relieved only by muscular exertion, by diversion of thought, or else by the quickening of some secerning function.

Physical agents operate on the organization subservient to our passions, by modifying the state and supply of blood to the nervous mass, which stands intermediately between the object and the percipient. Those experiments in which the character and quantity of the blood has been directly altered by injecting fluids into its vessels, will best illustrate this subject. The blood of one animal being thrown into the veins of another, produces disorder in proportion to the quantity of blood transfused, and to the disparity in species of the subjects of experiment; for it appears that the globules, if not the elements of the blood, proper to one kind of animal, are generally unfit to circulate in the system of another. Thus we find, that if the blood of an animal which produces milk, a mammal, be injected into the blood-vessels of a bird, the effects are so violent as to produce instantaneous death. This result can not be explained by supposing a mechanical obstruction to the passage of the blood-corpuscles through the capillary vessels, since it is found that those bodies are smaller in mammalia than in birds. They are, however, of different forms; those of mammalia being circular, those of birds being elliptical. But if the fibrin be removed from the fresh-

drawn blood of a mammal, it has been proved by Dr. Bischoff that it may be injected in moderate quantity into the veins of a bird without inconvenience.

Transfusion has been resorted to, with great benefit, in many cases of nearly fatal exhaustion from loss of blood, and in other forms of disorder where the waste and deterioration of the blood have been greater than the assimilative processes have been able to counteract. In cases of this kind, the influence of the circulation on the mind is strikingly demonstrated, as great deficiency and deterioration of blood are attended with unconsciousness, or, in slighter degrees, by much confusion of memory and tardiness of thought, often passing into delirium, which state is relieved at once by a new supply of pure blood, for the wandering soul can thus again connect itself with surrounding objects in its accustomed manner, since the nervous power of the brain and senses necessary for that purpose is again supplied with appropriate energy. At one time, such immense and marvelous consequences were expected from the practice of transfusion, as plainly indicated the most unreasonable ignorance of physiology in those who professed to teach it. Patients and their physicians, with equally unwise expectations, have submitted to transfusion. They generally experienced violent pulsations, with vehement increase of heat, profuse perspirations, great pains in the stomach and loins, with a sense of suffocation, of course associated with corresponding mental states. Excessive vomiting sometimes occurred, which calmed the turbulence, and was succeeded by profound sleep. These facts only show that the blood of one man may be poisonous to another, and that the whole constitution of each being is individual, every part being consistent with the totality.

Medicated fluids have been injected into the veins for the cure of disease, both in this country and abroad, but

without any marked benefit. The effects of this treatment were most remarkable in some cases of spasmodic cholera; that mysterious malady, which, like a messenger of especial warning from the Almighty to the trading world, lately decimated Europe and America. In this disease, the blood becomes peculiarly vitiated, and assumes the appearance of liquid pitch. The deficiency of fluid in the blood in such cases being the most prominent fact, physicians deemed it probable that fluid might be added to it with advantage, and experiment justified their conclusion. More than a gallon of pure, warm water, or sometimes a weak solution of common salt and soda, has been injected in many such desperate cases, and the individual who, as if without a Savior, lay waiting the last touch from the visible hand of Death, with a countenance of appalling anxiety, has been quickly roused from his death-bed, apparently endowed with new life, the bloom and smile of health beaming from the face, and the soul free to utter its joy in cheerful actions and pleasant words.

> "Abeunt pallorque situsque;
> Adjectoque cavæ supplentur sanguine venæ;
> Membraque luxuriant."

This bright improvement, however, soon passed away, except in a few instances, in which other means were also employed, and in which time was thus taken advantage of to effect a perfect cure.

Of course, we should expect that great changes in the condition and quantity of the blood would induce great alterations in the mental manifestation; but these experiments do not more plainly exhibit those changes than is seen in the effects of intoxication, or any other form of poisoning. Most strange and absurd reports were, however, at one time raised by hasty transfusers, concerning the wonderful effects of new blood upon the mind. Thus a simpleton was said to have become a

great wit by a liberal supply of lamb's blood, and, by the same means, an old, blind dog to have suddenly acquired the sharp sight and friskiness of a pup. From what has been stated concerning the purposes of the blood in the vital economy, it can be well understood, that those tendencies and merely animal propensities which owe their excitation entirely to the blood, and depend for their activity on the condition of the capillary vessels, would of course be so vastly influenced by transfusion, as to appear like the direct result of the mere materials thus furnished. And, on the same grounds, we can comprehend how a person, with a brain debilitated from deficiency of good blood, might immediately manifest a strong mind when the brain was rendered fit to be acted on by the thinking power, by being fully supplied with the necessary pabulum. When Professor Harwood, of Cambridge, transfused the blood of a sheep into the veins of a dog previously bled, the dog immediately after began to eat grass. An old bed-maker, who happened to be present, exclaimed, "Laud, maister, your dog is turning into a sheep." But this eating of grass may be better explained by the fact, that more arterial blood than was proper had been introduced, and the dog, more sensible than his master of the unnatural plethora, forthwith began to swallow grass to excite vomiting, according to its instinct in such a case. Many, however, like the old bed-maker, seem to expect that man, with his philosophic tricks, may be able to transfuse natures, and, as if there were no essential difference between the soul of a man and that of a monkey, to produce minds according to rule. But, in spite of theories, what God has ordained as specific distinction can never be confounded; and His idea in each individual, however interrupted and confused in its development by permitted interference in the form of, so called, accident, can yet never be supplanted by a substitute. Had the transfusers been more careful to

describe the kind of insanity which their experiments sometimes produced, and had they also told us the previous mental state of those subjected to them, the world would have been somewhat wiser than at present for their experiments. We have certainly, however, no reason to doubt, from what they have recorded, that the kind of mental derangement in any instance produced was, in every case, in perfect keeping with the previous habit and disposition of the individual. A case in point, which powerfully illustrates the influence of the blood on the brain, and which on other accounts is worthy to be kept in remembrance, is that of a patient treated for hydrophobia, in the Hotel Dieu, at Paris, in 1823. The history of the case was published by Magendie. It is stated, that the sight of a looking-glass, or of any liquid, excited the most violent agitations, and that the slightest noise, or even the mere contact of the fingers with his hair, caused the man's body alternately to bend and unbend itself with an energy and violence almost incredible, and which Magendie considered quite unaccountable. In this state, the patient was fixed by force, and a quantity of warm water was injected into a vein in his arm. Speedily the symptoms all vanished, and within half-an-hour after the operation the patient asked for his relations, saw them, conversed calmly with them on his affairs, and quite resumed the courage and hope belonging to his character. It should be observed, that the physical state of this patient was very remarkable, other disease being implicated with the hydrophobic symptoms, of which disease he died after the hydrophobia was apparently cured.

That a rapid circulation of the blood, from whatever cause arising, will produce a general feeling of vivacity, provided there be no disease oppressing the brain, is evidenced by a great variety of circumstances; and as a general rule it may be observed, that individuals having

a slow, full, steady pulse, are tardigrade in their mental as well as their bodily operations, and but little disposed to sympathize with those who briskly enjoy the gayeties of life; not, indeed, that they are necessarily of melancholic dispositions; they may delight themselves in day-dreams as habitually as a poet, but instead of a flashing and glittering paradise, full of graceful beauty, lively music, and dancing, the phantasmagoria of their visions will move with the stateliness of a solemn procession amid scenery as formal as that of an old English garden. It appears as if our feeling of time were, in some manner, measured by the pulsations of our hearts, which no doubt determine the frequency of our breathings; therefore, also, the peculiar motion of the brain, and probably the successive impulses of nerve-action on all the muscles and senses. Of course, our consciousness of existence is modified by the sensation thus induced, although it is too undefined and indistinct to be described, except in such general terms as convey a notion of individualism existing in new states; because, in fact, the sensation is not felt in connection with any special sense, or with any particular organ, but in connection with every part of the body at once, and therefore it imparts a peculiar sense of self-hood, which fits the individual for sympathy with all others in an equal state of excitement. Every sensation is both a cause and a consequence of internal action —that is, of some change taking place in the blood, under the present operation of the mind. But there are sensations which arise spontaneously from peculiar conditions of the blood, or, more correctly speaking, arising therein without any obvious connection with external influences such as impress our senses. Now such states of nerve or sensation exercise the greatest power over our conduct and thinking, and, indeed, constitute our specific temperaments. But they act the more forcibly upon us, because they act without our suspecting the con-

stancy of their influence, and therefore without our endeavoring to restrain them. Hence we learn that the habitual dominion of sound moral and religious principles — that is, proper belief and right affections — can alone secure any suitable degree of control over such riotous and susceptible bodies as ours. And thus, also, from the felt fact of our incessant dependence on causes of mental disturbance, concealed and circulating within our very blood, we are taught the wisdom and justice of mutual forbearance, and the equal rights of fraternal charity.

The blood appears to be electrical in its action; and, as it is proved that a current of warm fluid gives out electricity by the friction of its passage through small tubes, we see at once how well the circulation of the blood is calculated to maintain a constant evolution of electric power, which, however, we are not justified in supposing, according to common opinion, to be always of the same kind and character; but we are rather required by facts to conclude that it is so modified by life and mind, as to act very differently at different times, and probably so to enter into new combinations, as at different times to operate quite like different agents, just as we find the other chemical elements to alter their actions according to their combinations. Venous and arterial blood widely differ as to their electrical conditions; and there seems to be little doubt that the blood of different individuals is also in different states, and that the opposite sexes are in this respect peculiarly affected, giving rise to influences which permeate the nervous system in an especial manner, in subservience to the grand objects for which man and woman were constituted as associates in the holiness of uniting affection and oneness of life. During the successive stages of our progress to maturity and subsequent decay, the blood also evidently varies as to the degrees of vital electricity evolved from

it; not only because the vessels themselves, and the rate of velocity in the action of the heart alter, but also from the chemical state of the blood varying with the different periods of life. From this circumstance we may probably account for the strikingly injurious effects to children and youth in their being allowed to sleep with aged persons. They seem to experience what Dr. Copland calls "a gradual blight," which can not be cured but by the removal of the cause and the cautious use of restoratives. The ancient physicians of the Hebrew nation, if we may judge from their advice in the case of King David, appear to have been fully aware of the vital power imparted to the infirm by the proximity of a person in vigorous health; but their authority will scarcely excuse the bewildered selfishness of those hoary remnants of manhood who would endeavor to prolong their infirmities by obtaining vigor in a conjugal incongruity. That the nervous susceptibility or impressibility is a condition of nerve which highly favors vividness of mental perception, and is intimately connected with a peculiar state of blood, and with galvanic action, or something nearly allied to it, appears to me to be evinced by the remarkable history of Casper Hauser, who from his birth, until about his eighteenth year, was confined in a dark, narrow cell, and fed only on coarse bread with pure water. When at first removed from his prison-world, his faculties were scarcely more developed than those of a new-born babe. Having been so long confined in darkness, daylight was intolerable to his eyes, and excited universal spasms; and substances which to others were inodorous, produced violent effects on him by their powerful smell. That of wine caused severe headache; that of meat excited sickness; and that of certain flowers, peculiarly painful sensations. In passing a churchyard, the smell thence arising, and which could not be detected by his friend, produced a shuddering in him,

which terminated in violent fever and perspiration, like an ague. For a long time, in consequence of his delicate taste and smell, he retained an utter aversion to all aliment except bread and water. From this circumstance, there can be no doubt that his blood was in a peculiar state; but what I wish more particularly to notice is, the fact of his nervous susceptibility in consequence of that state of blood, and that this susceptibility was remarkably evinced in connection with magnetism. Thus, when the north pole of a magnet was held near him, he felt a drawing sensation, as if a current of air went from him; while the south pole seemed to blow upon him. Professor Daumer and Hermann tried all kinds of experiments on him, to determine how far fancy might influence his feelings, but they always found that his sensations correctly indicated which pole of the magnet was directed toward him, even at considerable distances. He detected metals placed under oil-cloth, etc., as they produced the sensation of drawing and a feeling of chill, which affected the arm directed toward them, and caused the veins of the exposed hand visibly to swell. These experiments always produced indisposition. Another incident in the psychological history of this individual is especially indicative of the influence of the blood on the mind: after he had by frequent endeavors surmounted the difficulty of eating animal food, and when he began to take it regularly, his mental activity began to diminish, the expressive brilliancy of his eyes departed, he became absent and indifferent, and an intellectual obtuseness took the place of excessive sensibility, but this perhaps the more readily, from the preceding delicacy of his perceptions, and the excitement to which he was thence incessantly exposed.

The facts related on the subject of this chapter afford us an important lesson, and are sufficient to prove the necessity of preserving the blood in a pure and healthy

state, if we would continue in the full possession and happy exercise of our intellectual faculties, and hence, also, in the proper enjoyment of our affections. We shall, therefore, now proceed to consider some of the means by which this most desirable end may be accomplished. A strict regard to the choice of food and drink is certainly among the most direct means conducive to purity of blood, and therefore the regulation of appetite is among the chief of our daily duties, and the due management of the stomach a large part of morality; for as Abernethy says, "I tell you honestly what is the cause of the complicated madness of the human race: it is their gormandizing and stuffing, and stimulating the digestive organs to excess, thereby producing nervous disorder and irritation."

CHAPTER XV.

FOOD.

As before observed, the study of the stomach is the study of morality. By investigating the influence of food and drink on our minds, we soon discover the strongest motives for self-denial, and learn many a forcible lesson concerning the nature and extent of our responsibility. The results of mismanaging the stomach typify all the effects of our abandonment to any other propensity; for it is most evident that if we do not keep appetite under control, the right use of our reason is abolished, and we become more completely enslaved to our lusts than the most groveling beast. The comfort and efficiency of intellect, nay, the moral perception, manliness, and virtue of the mind depend greatly on our use of aliment; and in the very means by which we sustain the strength of the body, or most directly disorder its functions, we at the same time either fortify or disable the brain, so that we shall be qualified to use our faculties with advantage, or else, amid the confusion of our sensations, be rendered incapable of rational attention. Who has not seen the bright dreams of his morning's philosophy clouded by the fumes of a tempting table, and the best resolves of calm thoughtfulness lost amid the sparklings of wine? Man has invented most of his dangers; he delights in exposing himself to artificial excitements, and he would rather run the risk of perdition than not try the force of temptation; for alas! since self-confidence first abased him, he has never be-

lieved that he could not conquer appetite according to his knowledge whenever he pleased, until he has found his will itself corrupted, and all his humanity helpless and undone. Animal instincts never conduct to such dangers; but the human mind, while it refines the sensations of the body by its own intensity, aggravates the evils amid which it riots, and by its greater capacity for pleasure twines the snare most cunningly around the soul, and by speculating in sensualities, raises a multitude of evil spirits, which at first appear in forms of delicious beauty, but as they weary his brain with their ceaseless presence, they gradually assume disgusting appearances, and as they become more and more hateful, he is more and more in earnest to dismiss them, while they only the more closely haunt and more thoroughly torment him. Reason has been placed by the only wise God in the midst of seductive influences, that by thus perceiving the slender tenure of her power, she may be forced to look above the body for motives to sustain her in dominion over appetite. Those who yield to their lower propensities so far as to regard their indulgence as the end or purpose, instead of the means and appendage of life, to surfeit rather than to suffice nature, are said to make their lusts their gods, because they really serve and obey them. *Quorum finis interitus, quorum Deus venter, et gloria in dedecore ipsorum.* Reason is strong only in proportion to her motives. She is next to omnipotent in her control over the body when she derives her motives from the Almighty. Hence the reasonableness of the account of man's first disobedience. The test was simple and sufficient. But in order to understand its force, we must remember that the temptation was presented with a false promise of increased knowledge and power. It was made reasonable by at once appealing to appetite and to the pure self-love of our nature · for reason's fall is the distrust of her

Maker. Therefore, as Byron says, "if we get rid of the apple, we are no better off." Such, then, is the grand lesson we learn from our necessities being provided for in such a manner that the exercise of judgment is required to avoid the dangers to which our appetites, undirected by exact instinct, would otherwise surely lead us.

The education of our appetites, first under the tuition of parental care and foresight, and then under the vigilance of our own reason in the actual experience of good and evil, constitutes the very marked distinction between a responsible and an instinctive creature. The latter is under a law which governs its propensities with undeviating precision, and which operates as a function of its bodily structure, but the former must be dependent on obedience to laws belonging to the mind. Man discriminates as regards known effects, as well as from choice of sensation, but the lower creatures have no such choice, for instinct is ruled by appetite, but reason by knowledge of consequences. Instinct is informed by acuteness of sense, and has no power of correcting its impressions by reflection; but reason is taught by a sagacity derived from the power we possess of comparing appearances and estimating realities. Reason is analytical as well as logical; but instinct is neither, but it is merely sensuous, and man's mind is little better when he chooses to enjoy the present without regard to the future. Hence the use and abuse of appetite afford criteria of the state and power of our reason. To use the world, without abusing it, is the doctrine of Christianity, because it is a dispensation which sets our reason right with regard to all our appetites, while it introduces our spirits into fellowship with the Creator, who would have us all enter into the fullness of His own satisfaction—that rest in goodness which contemplates a universe reposing in the peace, glory, and blessing of its Maker; for to partake of the bread of heaven is to feast with God.

The word appetite has been restricted by common usage to express the propensity for food; and probably because of its regularity, importance, and power, it furnishes the strongest metaphor of mental desire, as when Lamb speaks of Coleridge looking forward to death as if hungering for eternity. This phrase, however, is but a poor imitation of the beautiful words, *Blessed is he who hungers and thirsts after righteousness, for he shall be filled.* The wise man, in his proverbs, has taught the necessity of temperance in all things, by language referring only to this desire for food, and his exhortation to us to cease from our own wisdom is well enforced by enjoining abstinence from deceitful food, as if to intimate that truth alone is the proper aliment of the soul. Wisdom and temperance have always been companions, and men most famous for the extent and continued energy of their faculties, have been so convinced that habitual moderation in eating and drinking was essential to the full and healthy employment of their intellect, that those best known for clearness and elevation of mind have also been most remarkable for their control over their appetites. Sir Isaac Newton is a good example. Dr. Cheyne states of him, that when he applied himself to the investigation of light and color, to quicken his faculties and enable him to fix his attention, he confined himself all the time to a small quantity of bread, with a little sack and water, without any regulation, except that he took a little whenever he felt his animal spirits flag. Here we witness true philosophy at work to facilitate its own labors; and we do not wonder to find that the man who, when checked in his researches by the imperfection of his instruments, set about inventing and manufacturing new ones with his own hands, should also resort to the best means for sustaining the functions of his brain when determined to use it to the extent of its power; and although Celsus informs us that *imbecilli stomacho*

penè omnes cupidi literarum sunt, he knew full well that a bad digestion was by no means a real corroborant of the rational faculties, and however morbidly greedy of books, like the sickly devourers of circulating libraries, dyspeptic individuals might become, their weak stomachs but little aided to strengthen their judgments, or to render them the better qualified to administer to the vigorous growth of other minds. Yet, doubtless, as the same authority observes, *obesus venter non parit subtilem, intellectum*, an excessive stomach comports with an empty head; not that a man of fair rotundity, like Shakspeare's Justice, can not occasionally think with sufficient clearness for peaceful and epicurean purposes, but simply because the soul of a man fully alive to the great policies of existence must move his affections and his intellect too busily in their working on his nerves, and expend the vitality of his blood too rapidly to allow him to take his ease at long meals, and to accumulate a burden of flesh to impede alike both his body and his mind. The happy medium which Newton endeavored to maintain was just that which would preserve the blood in the fittest state for the purposes of the mind while intently acting on the brain; and probably not a little of the splendid clearness of his demonstrations may be attributed to the success with which he controlled all his bodily propensities, by the moderation which he invariably observed in the management of his stomach.

Many remarkable individuals have been carried by their notions of temperance to most intemperate extremes, and by needlessly abstaining from the use of certain foods, and restricting themselves to very small quantities, have endeavored to secure the favor of God and the admiration of men. If, indeed, by such abstemiousness the soul could attain completer mastery over the body, and be thus enabled to dwell more constantly in the region of pure thought, it would be wise, it

would be happy; for though the favor of God is not thus purchased, simply because love can not be bought, yet impediments to its reception may be thus removed, and the faculties of the mind be rendered more capable of investigating and enjoying the divine character. But *that* soul must be ripe for heaven, and ready to depart, which, when living on the verge of starvation, finds itself more disposed to think of celestial delights than of earthly dainties; and, doubtless, most men would find it any thing but a help to holy contemplation to deny themselves the means of comfortable enjoyment. In truth, any endeavor to detach the affections from things that perish in the using, will be entirely unsuccessful, unless the grand change has already passed upon the soul, causing it to feel affection for objects not perceived by the senses. Then, no doubt, a good degree of ascetic excellence may be acquired; for the spirit has already conquered the chief temptations of the body, and may soon confirm itself in the habit of supremacy, so that the functions of physical life shall be carried on with less waste of substance and less demand for food, while at the same time the mind may fall into a monotonous quietism, a dreamy bliss, from which it would be most painful to be awakened by the jarring sensualities, the business, the bustle, and the strife of everyday life. That the habit of comparative starvation is less injurious to health than gross indulgence, appears from the ages to which many fasting enthusiasts have attained. St. Anthony lived to the age of one hundred and five years, and St. Paphinus to ninety, on dry bread and water; St. Paul the Hermit arrived at the extreme age of one hundred and fifty-nine, on dates alone. We cannot test these and similar cases by weight and measure, as Liebig would desire, yet we can not doubt their general truth, since all evidence assures us that the secret of longevity is to be found in sustaining the vital functions

in healthy action with the least stimulus. A waste of power is improvidence, and that body will last the longest that is least agitated by mental perturbations, and is kept slowly and gently at its proper work. The express object, however, of these gradual martyrdoms was not so much to secure the benefit of the *corpus sanum* as for the sake of the *mens sana*, or rather, perhaps, that both soul and body might have a better resurrection. But the means best fitted for the one insures the advantage of the other also; and a most rigid regard to the kind and quantity of food, according to individual temperament, would prevent the body from oppressing the soul with that weight of carnality which so often causes man, who ought to go nobly erect, with his face toward heaven, to crawl prone on the dust, instead of walking with vigorous step in the light and liberty intended for him. It has been said, and probably with truth, that food has a higher bearing on the mind than on the physical frame of man. But this can only be in as far as the moral and intellectual being is dependent on the health and development of the body for its manifestation. We can not question that diet and regimen so influence the constitution as to cause all the degrees of difference between the fullest vigor and the utmost feebleness; and as the enjoyment and capacity of the intellect require a competent power of body and a state of comfort, which depend on a due supply of suitable blood, and consequent nervous energy, as shown in the preceding chapter, it of course follows, that whatever disturbs the digestive process, and thus vitiates nutrition, must in a corresponding manner disorder sensation, introducing pain where there should be only pleasure, and a tendency to fretfulness and discontent where cheerfulness and hilarity would be the natural consequence of a full supply of healthy blood. It would be scarcely consistent, however, with physiology to adopt the suggestions which Milton so poetical-

ly persuades the angel visitant of unfallen man to express.

> Time may come, when men
> With angels may participate, and find
> No inconvenient diet, nor too light fare;
> And from these corporal nutriments, perhaps,
> Your bodies may at last turn all to spirit,
> Improved by tract of time, and wing'd, ascend,
> Ethereal, as we; or may, at choice,
> Here or in heavenly paradises dwell:
> If ye be found obedient, and retain,
> Unalterably firm, his love entire,
> Whose progeny you are. Meanwhile enjoy—"

The influence of diet on the moral and intellectual character of children has been extensively observed, because they present the best opportunity of witnessing the direct effects of bodily condition on temper, their feelings being undisguised. Of course, as their bodies are in the process of formation, their mental habits are also forming; and it is of vast importance that this subject should be well understood. It is, however, unfortunately, but little regarded in general, and education is conducted more frequently as a plan by which the mind may be forced into any shape by fear, than as a matter the success of which will be proportioned to the care with which the body is treated and the faculties encouraged, according to physical fitness for mental enjoyment. The work of mental improvement should commence by improving the body. Let the soul be happy in its home, and it will soon expatiate amid ever varying ideas, and be ready to sympathize with all those who will lead it out to contemplate and enjoy the facts of creation and of history. This is the whole mystery of education. It has been proved, by comparisons among large numbers of children, that those brought up in poverty and privation, having of course a bad physical condition, are much more torpid in intellect and irritable in temper than children of

the same age who have been better fed and cared for. Under the best and kindest teachers, the former can not keep pace in mental advancement with the latter. This incapacity may be hereditary; for, alas! not the least among the numerous miseries of abject poverty is the physical deprivation which fastens on the souls of its children a tendency to mental aberration and degeneracy, by depraving the bodily constitution. We scarcely wonder that the wan and withered *young* mother, in whose breast starvation has dried up the fountain of nature's charity, should look with tearless but bloodshot eye upon her dead baby, and thank God for taking it away. This is no imagined possibility, but a bare, horrible, frequent fact. There are many such mothers, who, because labor is paid so grudgingly, witness no charm in the domestic circle; and many more who, after watching their infants through atrophies produced by their own hunger, have been rewarded for their affection and anxiety by the fierce ill temper thus engendered in the boy or girl, whom neither weary wife nor cheerless husband has the wisdom or good-feeling to soothe and manage; for, inured to the wretchedness of finding no pity from nominal Christians, they, too, seem to escape from the keener sensibilities of soul by indulgence in sensualities. Their moral nature has been starved by those whom God required to act as neighbors to them. Yet it is wonderful to see how the kindly affections generally triumph over these terrible evils of life, and how the noblest feelings flourish in the midst of the deepest poverty. Thanks be unto God, the poor have still a mighty faith in Him who feeds the sparrows, and in each other, too; so that they will, most of them, cheerfully divide the last small loaf with the needier, and then trust to Providence for the next meal.

Physiologically considered, starvation seems to act on the brain, by causing a vitiation of the blood, similar to

that which occurs in fever; and, indeed, that fever with delirium is the direct effect of insufficient food, history furnishes many proofs, in the consequences of war, especially among the besieged. But we need not look far back to search the records of history for such effects of starvation; we see them nearer home, in the cellars of Liverpool, and the cabins of Ireland. Insufficient or improper food, although enough, perhaps, to maintain a feverish and infirm life, will so disorder the nervous functions as to impede mental action, to such a degree, that moral purposes can not be consistently followed out. Those affections which bind hearts together, and enable them to bear all burdens with hope, thus become benumbed in despair. A sort of moral paralysis is often witnessed in the extreme of want; and I have known the memory of a loving mother, without any other disease than starvation, so completely disordered, by want of blood, as absolutely to forget that she had an infant. Still her love was strong, even to agony, as evinced by prayers and sighs when her attention was recalled from the obliviousness of inane delirium to the presence and unsatisfied demands of her little one. Shall we feel surprised to read in the newspaper of some untutored mother, in the wildness of her many woes, turned away starving from the door of the union-house with an exhausted heart, leaving her babe to perish on the cold ground? She has experienced only treachery where she trusted most heartily, and believing, from the dictates of her bosom, that the helpless could not plead in vain for shelter and food, she has sought relief and found it not. Physiology teaches us, common sense assures us, that desperation must result. With such a fainting pulse, and such habits of strong feeling, where shall she find hope? As long as she felt her blood in her glowing bosom, she fed her babe with her own life, and believed in Providence. But now all humanity, and even her

own nature, her untutored reason, and her very instincts fail her. What proof has she that God is love? Job could curse the day in which he was born, but out of the whirlwind he heard the voice of Jehovah; this poor woman can only cast back her all, her whole wretched being, upon the hand of Him who gave it. He will require her blood and the blood of her offspring, from those to whom He committed the gospel of His charity, and what shall they answer?

All our knowledge of blood and nerve, and of the purposes they are to fulfill in regard to the human soul in this world of wants and supplies, if it be worth any thing, proves to us one great truth—namely, that the dwelling of misery is not the home of virtue. Domestic comfort and privation are contradictions, and the wants of the body must be satisfied before the soul can find leisure for abstractions. It is a vain and aggravating mockery to preach, in words only, the doctrines of peace and loving-kindness where fathers and mothers and children cling together in rags and squalor and hunger. No doubt among such are often found the most heroic examples of Christian manliness and affection, but alas! there also dwells with misery every form of reckless viciousness. But what has that to do with your conduct, O man of comfortable morality? What self-denial have you practiced for the benefit of your brother? It is true that the Gospel supplies aliment for the deathless spirit, and enables it to bear wisely, meekly, nay, even happily, the famishing of the body. We have witnessed its triumph in such a case, where disease actually caused death by starvation; but still the best harbingers of the Gospel are food and clothing, and all the visible evidences of sympathizing human heartiness. Be ye warmed, be ye clothed, be ye fed, are words, not practical faith; but providing the means for those who need them is true living godliness, which nowhere teaches men to take verbally even truth itself,

much less wordy trash, as a substitute for bread. He who fed the multitude of famishing unbelievers in the desert of Arabia with daily showers of angels' food, will not have men convinced by miracle alone, but also with common mercy ; and therefore the power and the goodness are seen together, as in Him who is our spiritual bread, and who taught us what He meant by loving our neighbor as ourselves. If, then, we would have the heart open to faith, we must appeal to it through charity and hope, nor think to prove our interest in the souls of men, without doing our very best to render the body a comfortable abode for the sublime and mysterious tenant. Religion may well appear like madness to a starving wretch who merely hears a talk of contentment and patience ; but this happily rarely occurs, for without doubt those who are most ready to dispense the glad tidings are also the first to help the necessitous in every way. Those who would be useful in erecting the fallen spirit of humanity, should not for a moment forget that corporeal want thoroughly unfits the mind for attention to its higher necessities. In fact, insufficiency of proper food has been proved, on a large scale in our public lunatic asylums, to be a prevalent exciting cause of insanity as well as of crime, and it has been found that many of those abject beings, whom man's inhumanity to man has long allowed to subsist on a starving dietary, have labored under madness which required only a prudent and well regulated supply of generous food for its cure. Such a fact can be well understood when we reflect on what physiology informs us of the manner in which the brain is built up and kept in action by the blood ; and that, therefore, if this pabulum of life and nervous energy be deficient, either in quantity or quality, as well as habitually misemployed, then, of course, sensation, perception, idealization, and reasoning are so far liable to disorder ; and, of course, also, as the principles of morality are grounded in rational con-

victions and consequent habits of body, it will be unreasonable for us to expect a family to dwell together in moral harmony, unless divine truth has governed their affections before want entered.

Sameness of diet is also prejudicial to the mental faculties, especially if conjoined with a monotonous manner of life. This fact is strikingly demonstrated by the frequency of hypochondriasis or depression of spirits among the inhabitants of the western islands of Scotland, and more particularly still among those of Iceland, as testified in the former case by Dr. Macculloch, and in the latter by Dr. Holland. We are instructed by these circumstances to observe the importance of variety in our aliment, and to admire the goodness of Providence that supplies such a diversity of objects for every sense, and thus teaches us that our Maker considers our true enjoyment as the end of His plans in creation; and therefore we should endeavor to avoid too restricted a mode of life as we would the bonds of slavery: and that not only for our own good, but for the benefit also of our offspring. Probably as the intellect of man can not be fully developed without free intercourse with every variety of mind, nor that of society without international commerce, so neither can the body attain and preserve its best state without occasional change in the kind of food, such as the diversities of climate and of season are intended to produce.

Although Galen perhaps rather unduly estimated the benefits of regimen when he desired the philosophers to send all bad characters to him, yet no fact is better established than that diet greatly modifies the temper. Those who, conjoining gastronomic industry with general idleness, acquire dyspeptic acidity of stomach, commonly know, also, from experience, the meaning of a sour disposition; and those in whom good-humor still so far prevails over bad blood as that they carry a pleasant

countenance, yet feel, when gout is brewing in their veins, as if some evil spirit had possession of them, since the slightest circumstance that interferes with their pleasure throws them into sudden rage. The condition of blood which precedes gout is so constantly associated with irascibility, that John Hunter says gout and anger are almost synonymous with some persons. Indeed, it seems that what generally goes under the name of irritability is essentially a disorder of the blood, which operates as a felt inconvenience, an unnatural stimulus, disturbing the proper action of the brain, and rendering it unfit to be employed for the ordinary purposes of the mind. Unless bodily activity accompany free living, this state is sure to be induced, as students are generally aware; for beef and stimulants freely enjoyed very shortly reduce the faculties to confusion, unless by violent exercise the waste of the body is, in some measure, proportioned to the supply. The tiger in his cage becomes more wretched and restless if allowed two meals a-day instead of one; and even the gentlest of creatures that ever graced a drawing-room, will become the most splenetic and pitiable of wives, if, shut up by indolence or fashion from the free use of her limbs, she indulge her appetite, without, at the same time, fulfilling the especial purposes for which she is a woman. Healthy mothers who suckle their own offspring are well known to be happier and more amiable than others, not because their tempers are not tried, but because their blood is in a better state to bear their daily vexations. Cerebral excitement, however, may be due either to deficiency or to redundancy of blood, and it is quite certain that, without respect to its quantity, its chemical condition alone will alter its influence on the brain. It is probable, however, that in extreme cases of excitement some powerful emotion kindles a flame of which the bad blood furnishes the fuel. In phrensy, the character of the individual is rather inten-

sified than changed, the state of affection in which the malady may have seized the patient continuing in general throughout the disease. Whenever we witness undue excitement, we may be certain that there is something wrong in the physical, as well as in the moral state. It is important to act upon this fact, for much crime and misery will be prevented by advice and assistance calculated to remove the causes of this condition.

There are a number of curious stories among old writers, in relation to the influence of certain meats upon the imagination; but we can not regard them as facts, or, at least, not as in relation to cause and effect. Sennertus, a learned physician, relates that a young woman of Breslau being struck with epilepsy on seeing a malefactor's head cut off, was, when all other remedies had failed, persuaded to drink the blood of a cat. She soon after began to cry and jump like a cat, and to hunt for mice, with silent watchfulness, at their holes. He gives another case of one who, being fed on swine's blood, took especial pleasure in wallowing in the mire; and of another who, on eating the brains of a bear, became of a bearlike disposition. We know, however, that the magicians among the ancients went further than this, and pretended—with how much truth we can not say—that they possessed the power of altering the imagination of a man, so that he should fancy himself any kind of bird or beast, and imitate, in his madness, the movements and voices of such creatures. Baptista Porta tells, that one method of accomplishing this was, by mixing a portion of a powerful narcotic poison—*solanum manicum*, or mandrake—with the brain of such animal as it was desired should infest the fancy of the party who swallowed it. He affirms that he tried this poison on one of his comrades, who had gormandized a large quantity of beef, who forthwith imagined himself surrounded with bulls rushing on him with their horns.

However we may regard such testimony, it is no doubt true, that the constant use of animal food ill qualifies the mind for literary application, since it produces blood which is very readily converted into muscle, and which, therefore, stimulates the brain to the desire of bodily action. Hence those who live by the chase alone have vast delight in it, and are peculiarly indisposed for studious occupation; they become ill tempered unless reduced by violent exercise. We can scarcely imagine a philosopher living on horseflesh like a Tartar, or on buffalo meat, like a Red Indian; and it is a fact, that these tribes appear incapable of civilization until they acquire the habit of using a less stimulating diet, and begin to cultivate the fruits of the earth for their own use. The effect is not due merely to quieter objects thus suggested to their minds, as might be imagined, but really to the state of their blood. The difference in the success of Christian missionaries among such people, and among those whose chief sustenance is farinaceous, is very striking, and worthy of especial notice. In the East and in the Polynesia, literature and Christian doctrines are seized on with avidity; but in vain were the most earnest labors of the best men to introduce reading and writing among the American Indians, until they had first been taught to sow corn and to eat bread. Thus it appears that the excitement of destructiveness is not only prejudicial to peace but also to intellect, and the height of barbarity is the height of discomfort.

CHAPTER XVI.

FASTING.

It may be asked, if the effects of forced abstemiousness on the mind are so detrimental, as shown in the last chapter, how happens it that fasting has been enjoined as a religious duty? Occasional abstinence and starvation are, however, vastly different things; the former may relieve and invigorate nature, but the latter, without doubt, must sap the very sources of life and power. But the influence even of the most moderate abstinence will be modified by the mental state at the time, and the purpose and direction of the will in this, as in other duties, will determine the amount of benefit to be derived from it. If the soul be not calmed by fasting, it will be irritated and confused; but as we find some individuals soothed by debility, and exhibiting, even in great suffering, a moral serenity which in vigorous health they never exhibited, while others, under the same circumstances, become morose and unmanly, so under the influence of fasting, we should naturally expect to witness opposite consequences, because, in fact, the same causes are operating under opposite conditions. The mind of one is fretting, it may be, over what it has lost; and the mind of the other, inspired by a divine hope, struggling on to the attainment of some spiritual elevation, some intellectual and moral dignity, of which he is well assured if he but endure to that end.

If there be a demand for bodily exertion during pro-

longed fasting, the sense of weariness and languor, in short, the entire unfitness of the muscular frame and nervous system for physical effort, must produce bad temper; therefore the poet rightly says—

> "And join with thee calm Peace and Quiet,
> Spare Fast, that with the gods doth diet."

Sir John Franklin, in his "Journey to the Polar Sea," describes his party, after they had been reduced by want of food to extreme weakness, but yet obliged to exert themselves on their homeward way like true men, as forcing themselves to converse, with parched lips and tongues, to avoid, as far as possible, reverting to their dreadful situation. "I observed," he says, "that in proportion as our strength decayed, our minds exhibited symptoms of weakness, evinced by a kind of unreasonable pettishness with each other. Each of us thought the other weaker in intellect than himself, and more in need of advice and assistance. So trifling a circumstance as a change of place, recommended by one as being warmer or more comfortable, and refused by the other from a dread of motion, frequently called forth fretful expressions, which were no sooner uttered than atoned for, to be repeated perhaps in a few minutes. The same thing often occurred when we were endeavoring to assist each other in carrying wood to the fire; none of us were willing to receive assistance. On one of these occasions, Hepburn was so convinced of this waywardness, that he exclaimed, 'Dear me! I wonder if we shall ever recover our understanding!'" What a beautiful lesson to teach us mutual forbearance in our mutual weakness! This pettishness, like that of children weary with their play, is natural to us all, when the mind can not employ the body agreeably; for to be excited to any exertion in this state is to be more feelingly aware of bodily incapacity. The soul wants rest, or, rather, the order of Providence indicates that the body should be left to re-

pose when exhausted; and if it can not perfectly rest, the mind nevertheless gets into a dreamy state, and busies itself with fancies, or seeks its own satisfaction in reverie or partial delirium. There is a curious fact in connection with this withdrawal of the mind from the consciousness of bodily distress, which physiology quite fails to explain—a state the very reverse of the real circumstances is enjoyed in thought. Captain Franklin states, that their dreams, when they fell asleep with the acute pains of hunger upon them, were usually of a pleasant character, being often about the enjoyments of feasting. This debilitated state of the body, however, is attended by a peculiar mental absence, even when most awake, so long as the will is not directed to the muscles. The individual bodily condition is lost sight of; hence, in this brave party, each thought the others more in need of assistance than himself—an extremely interesting proof of the Divine Benevolence anticipating the trials of our constitution, by providing in the constitution itself the means of escaping from them. Perhaps it may not be impertinent here to put a question to the advocates of mental duality. When the person had given hasty expression to his fretfulness, and then instantly discovered its impropriety, are we to conclude that one *ego* perceived and endeavored to atone for the other's injustice? Then, again, we learn that these fine fellows, in spite of their better judgment, ate too much after their starvation. Must we suppose that one cerebral *ego* produced the prudence, and the other the appetite? Let us consider the causes of their state: anxiety, fatigue, cold, starvation—in short, misery and diseased blood, such as we see too much of in this land. Now could these causes act on only one side of a man's brain at a time? Did the cerebra take it in turns to suffer, or did these causes operate on the whole nervous system at once? When these questions are answered

in consistence with the dual theory of mind, then we have others to put.

A fact recorded in Captain Franklin's narrative will easily conduct us back to our observations on fasting. It appears that the captain and his party fortified their souls by reading the Bible, as their best resource in their greatest troubles. They found it answer admirably. The man, also, who habitually enjoyed the truths of that wonderful book, was he whose conduct was most exemplary. He best endured the famishing process, and was the last to yield to fretfulness and the first to help others. That man was Hepburn. Hence the importance of mental habit and intention. It is curious to observe how gradually the rough Canadians who accompanied the expedition dropped their profane swearing, and assumed a sort of meekness, as their spirits drooped under starvation and the fear of death; but the pious men only evinced more confidence every day. It seemed impossible for them to give up hope; though their strength decayed and every exertion was irksome, and the greatest effort was necessary in order to rise from their seats, and they were obliged to help each other to accomplish this, yet they conversed cheerfully, as if sure of the speedy arrival of help. The deduction from all these facts is manifestly in keeping with our former observations. Fasting, to be advantageous to the mind and promotive of its spiritual advancement, must be accompanied by such employment of its faculties as tends to soothe and elevate the spirit. The testimony of a savage to a fact is sometimes as good as that of a philosopher. When an Indian chief wishes to meditate on any great plan, he says, "I can not yet see the future; I must fast and pray that the great Master of life may give me wisdom." Can we trace any connection between this custom and the direction to Esdras? "Go into a field of flowers where no house is, and eat

only the flowers; taste no flesh, drink no wine, and pray unto the Highest continually, and I will come and talk with thee."—(2 Esdras, ix. 23.)

Fasting must, indeed, have been practiced as a devout duty long anterior to any profane record, and it was probably practiced from the time of man's expulsion from paradise, as if to show that as seductive appetite first led to disobedience, so access to heaven was not to be attained in man's own desires and powers, but through the renunciation of even the necessary satisfactions of earth, that the soul might be supplied with spiritual aliment and strength from heaven. At least we learn from sacred history, that those who spake as they were prompted by the Holy Spirit were often directed to abstain from all "pleasant bread." As we can not imagine that the God of the prophets directed a useless or incongruous service, the fact that fasting was, under certain circumstances, enjoined, unquestionably indicates that abstinence favors the production of a peculiar fitness of mind for the admittance of divine illumination, at least when the soul is prepared by its knowledge and its faith for that exaltation which such a privilege implies.

True religion enjoins abstinence only in connection with meditation and prayer. This is reasonable, but it would be the reverse to require exertion from an exhausted body; and the attempt would but conduce to imbecility, if not to crime, for it is the testimony of terrible experience that want leads not only to mental but to moral madness when the soul flies not to the Almighty for sustentation. A gross and inordinate supply of food may be compatible with fat, contented ignorance, and even with the best good-humor and openness of character, so long as full employment for the body is found in the open air; but to require exertion all the day long from man, or woman, or child, with insufficiency of food, whether in the factory or the field, is to cause

morbid sensations, and to suggest ideas of destructiveness, as surely as hunger rouses the lion to seek his prey. That fasting, even when under the supposed authority of religion, kindles the murderous passions in those who are not habituated to self-control and the devotedness of holy motives, is largely exemplified by the information of those who have traveled in superstitious countries. Thus the author of Eothen, who, though anonymous, is evidently well informed, states that the fasts of the Greek church produce an ill effect upon the character of the people, for they are carried to such an extent as to bring on febrile irritation, with depression of spirits, and a fierce desire for the perpetration of dark crimes. Hence the number of murders is greater during Lent than at any other time of the year.

Notwithstanding the detection of many fasting impostors, we are bound to confess that the power of continuing a long period without food is not incompatible with what we know of vital possibility. Dr. Willan attended a patient who took only a little water flavored with orange juice for sixty-one days; but more marvelous still, cases of abstinence from solid food for ten, fifteen, or eighteen years are unimpeachably testified. Certain conditions of the nervous system are, however, recorded as attending these fastings, and this circumstance, while it confirms the credibility of such statements, tends also to explain them by bringing them within physiological principles. We know that in catalepsy, or trance, and some forms of madness, the vital actions are so much diminished that individuals may exist without food for a considerable time; and it is not impossible that exalted and ecstatic states of mind may so alter the functions of the body, as to fit them to bear prolonged fasting with impunity, or even with benefit. A state of body is certainly thus sometimes produced which is nearly analogous to the torpor of the lower animals—

a condition utterly inexplicable on any principle taught in the schools. Who, for instance, can inform us how it happens that certain fishes may be suddenly frozen in the polar sea, and so remain during the long winter, and yet be requickened into full activity by returning summer?

We possess testimony sufficient to prove that the habit of abstinence, when favored by rest and a peculiar temperament of mind, may so modify the nervous power as to permit the exercise of thought while the other functions are nearly suspended. The soul seems to work out its own desires in such cases, since it meets with no impediment in the use of the body, being employed entirely without attention to the physical state. Hence it happens that all sorts of visions, in the strangest combinations which imagination can present, have crowded upon the mental sight of persons who thus prepared themselves by abstinence, rest, and meditation. Their visions have been always according to the previous habit of their intellect and morals, nor dare we say that the soul has never thus been permitted to look beyond its ordinary horizon, to behold the truths of another region and of a future state.

A degree of abstemiousness is, by all reasonable persons, allowed to be favorable to mental effort, but an occasional fast is also found, in certain constitutions, to invigorate both mind and body. It seems to give time for the functions to complete their work, and then to rest for a while. Fasting, for a moderate period, diminishes the carbon in the blood, and thus prevents drowsiness, while promoting a free circulation of highly vitalized blood through the brain; and as on this kind of supply the ready power of the mind depends, a clearness and rapidity of perception may reasonably be expected under such circumstances, provided the muscles are not much in demand. Those who by mental habit can take advantage of this state may then attain the highest ecstasy

of meditative abstraction. Probably the greater number of persons who think themselves morally and physically in health, would find how greatly they are mistaken if they could but be induced to bring their appetites more into subjection, and wait for something like an urgent demand for nourishment before they indulged in eating. Instead of submitting to custom, and regularly resorting to the table three or four times a-day for the mere gratification of the palate, the wise plan would be sometimes completely to break through the habit, and enjoy the quickening power of a rational will triumphing over animal appetite. Thus health of body and mental fortitude, which together constitute the best assurance of intellectual power, may be equally promoted. Apollonius Tyaneus well defended himself from the accusation of holding intercourse with the devil, by attributing his clear and prescient judgment to abstemiousness and simplicity of diet. "This mode of life," says he, "has produced such perspicuity of ideas, that I see, as in a glass, things past and future." The influence of occasional abstinence from all food for a day or so in healthy persons, is seen in the well known fact that soldiers fight most heartily on an empty stomach. The blood is probably rendered more stimulating, and, the brain being less oppressed, and the lungs for the time being able to act more freely than when the diaphragm is pressed on, the muscular system, on the state of which physical courage so much depends, is exercised with the greatest advantage, and thus whatever moral courage the individual may possess is called into action with the fewest personal impediments.

In the training of armies, as well as in the training of other prize-fighters, whether human or gallinacious, the feeding is the principal thing, for thus the propensity of destructiveness is best prepared for extraordinary activity when stimulated by hunger, as we see in all beasts of prey.

In order, however, to prepare the body and mind for

their greatest efforts, it would be most consistent with physiology to take a moderate quantity of food and drink after a moderate period of abstinence; for we know that the effect of food on the mind is mainly determined by the previous condition of the body. How slight a supply will produce great effects on persons reduced by fasting, is well exemplified in the history of Captain Bligh and his hardy companions, when cast adrift by the mutineers of the "Bounty."

The manner in which semi-starvation and the habit of using stimulants may cause the increase of crime, by disordering the brain, and aggravating temptation, is probably explained by such facts. The principle of increasing the deranging influence of stimulants by previous exhaustion was formerly acted on in Eastern warfare. When horsemen were required in any peculiarly dangerous enterprise, it was the usual practice to subject them previously to a long fast, and then to intoxicate and let them loose. It is also reported, with what truth we know not, that certain Jesuits, when they required a man to engage in desperate deeds, shut him up in a large chamber, which they called the chamber of meditation, the darkness of which was just made visible by a very small taper. Here he was kept without food or drink for a whole day. A medicated draught was then given him, and thus he went forth prepared for any diabolical errand.

Moderation in the use of food is a far better remedy than medicine for an oppressed state of the circulation, whether arising from disease, or redundancy of supply. Fasting is the natural cure of repletion, and it is a curious circumstance, that abstinence is so frequently forced upon those savage tribes who are addicted to excess, such as the American Indians and New Zealanders Their diseases are but few, except where they approach the confines of civilization, and in some measure adopt

those habits which nature has rendered uncongenial to them. Among civilized nations, the use of purgatives is gradually taking the place of fasting. Hence the success of quackery in the aperient department among the English and Americans. We are an energetic people, and can not be comfortable without abundant nourishment; but then, taking very refined food in large quantity, without sufficient intervals of abstinence, we find our brains and our bowels both miserably sluggish, and then the pill-box supplies a handy sort of remedy for ills that common sense should have prevented. "The peristaltic persuaders" of the gourmand are as essential to his happiness as is his dinner; but not only do these gross livers need such helps: the exquisite poet must also resort to the apothecary to antidote the cook. Byron says, "The thing that gives me the highest spirits is a dose of salts." It diminished that congestion and irritability of his brain which his habits tended to keep up. He was at one period of his life epileptic; but he subdued the malady by extreme abstinence, frequently taking only vinegar and potatoes as his dinner. When he indulged in good living, and took stimulants, disorder of the brain returned in another form, and his temper became morose. It was then that a dose of salts cheered him. Brisk purgatives often relieve melancholy, and that most powerful one, hellebore, was the ancient specific for this disease, which generally arises from congestion of the liver and bowels causing an impure state of the blood. The frequency of a condition approaching to this is the secret of the demand for universal medicines, in the shape of strong purgatives. Here is the evil; many good men, who read and think pretty much, and fancy they understand physiology, because they have read about the blood, prove their ignorance of it by taking little exercise, and dolefully mismanaging their stomachs. They forget that moderation in eating and

drinking, as well as meditation, is a Christian duty, and that fresh air, cheerful society, and an occasional fast, would more effectually relieve the burthened *viscera* than a whole box of vegetable pills. Instances are not uncommon, even among the highly, but yet partially educated, in which some real malady has fixed upon the vitals, and those pills are swallowed in large quantities with manifest mischief. It is a matter of feeling, not of reasoning, with such persons. Their faith in the efficacy of the vaunted vegetables is grounded on ignorance, and confirmed by their sensations. Thus I have known a consumptive patient, of strong mind, obstinately persist in taking the pills, because they made him feel better, lighter, more cheerful, more happy. Of course, argument falls dead before such facts. Thus, in such forlorn cases, diarrhœa and purgatives hasten on the fatal issue; but then, by these means, the patients are kept just in that state which the highest degree of abstinence produces; their bodies waste and waste, but their souls are full of bright thoughts, as long as exertion is avoided. The habit of their minds becomes exalted by holy reading, it may be, and there is not blood enough in their veins to excite their passions, or to call their muscles into action. There is only just fuel enough to keep alive a clear flame, until the fire burns quite out. Such patients feel brighter and brighter to the last, and the pills, say they, are the cause of it all. These are taken again and again; exhaustion proceeds, but they go on to feel better, that is, lighter; the body is no impediment, except from weakness; so they continue taking the pills, and feeling better and better, until they die.

The moral of this subject is comprised in a few words: our hopes of health and happiness must always deceive us, unless founded on obedience to the laws of God, which are those of a rational faith as regards things spiritual, and of true science as regards things natural.

CHAPTER XVII.

THE INFLUENCE OF INTOXICATING AGENTS ON THE MIND.

Inordinate excitement is the result of inordinate arterial action of the brain, and of course, if once established, it is apt to go on as a chronic disease, subject to alternations of activity and exhaustion, with consequent changes in mental manifestation. A certain order, as regards time, in the action of the nervous system, is essential to its orderly employment by the mind; for thoughts and ideas are but as the shifting of scenes in the dramas of the soul. Disease of the brain, and every disorder in the functions of its several parts, whether produced by the state of the blood or the state of the morals, equally interferes with orderly nerve-action, and therefore so far disturbs memory and imagination; hence, in the hurry of excitement, comparison is impaired in proportion to the degree of that excitement. It may amount only to what we call nervousness, or it may proceed to the extent of actual madness. Reason may be startled by the rush of ideas, confounded by a crowd of sensations, or altogether lost in the whirl of thoughts suggested to the soul by the workings of the brain. The effects of impure blood on the mental state illustrate the subject, and these are probably best exhibited by the phenomena of intoxication, which will, therefore, be especially worthy our attention. Whatever either excites or depresses the nerve-power, appears, in a proportionate degree, to disturb the equilibrium in which the

mind and body best maintain their due influence on each other. Every deviation from this equipoise, whether commencing in the corporeal or mental state, is so far a departure from perfect health. If, however, the animal preponderates over the rational, as when the body is stimulated beyond the proper management of reason, then, of course, the rate and character of enjoyment must be degraded and depraved, and the man thus disordered must for the time become insane. The very individual who, under other circumstances, would delight in the beautiful realities of order and truth, in the right use of his senses, now feels some undefined pleasure in the rude fancies that mingle in confusion before his mental vision. The drunken man is, in short, quite a madman. The gradual development of this insanity is curious and instructive. The demon to whom he has voluntarily resigned his faculties, slowly, craftily, witchingly stirs his blood, and then takes full possession of his heart, that he may qualify the man for Bedlam and for hell. See the sot with his strong drink before him. He has taken his seat with a determination to be oblivious of his responsibility as a social being, and as an agent of the Almighty, and, instead of setting his attention upon subjects that would raise his soul above his sorrows, he empties his glass until sensations excited by the stimulus disorder his nervous system, and break his thoughts and ideas into fragments, like the light of heaven upon an agitated sea. At first he is gratified by the splendid confusion :

> " He swims in mirth, and fancies he has wings
> Wherewith to scorn the earth."

But soon a heavy darkness steals over him, and having forgotten his home and his relationship, and with not a distinct idea left, he looks like a beast that has just satisfied his stomach and has lain down to chew the cud His eyes stare vacantly into the air, while his features

and limbs all lazily partake of that brutal quiet so stupidly expressive of the absence of all possibility of intellectual content. But ere long the stimulus, working mischief within, stirs his brain and blood in a new manner, and he seems to wake up to new perceptions. Objects about him become veiled in a haze, and obscure, bubbling, whispering sounds, as from the boiling of the witches' caldron of infernal abominations, fall on his ear, not to disturb, but to enchant his soul with a horrible spell. The mistiness fuming out from that caldron grows higher and wider, and the serpent sounds thicken and grow louder, until all at once he seems surrounded by a living cloud full of strange forms and faces, at first pleasing as the fancies of a child, and then suddenly twisting into obscene contortions and hideous grimaces, while words of blasphemy and filthy merriment mingle their babble so closely on his ear that they seem to issue out of his own heart, and yet he is not afraid. Imagination is doing its worst work; the deluding devil has him at his mercy now, and according to his temperament he will yield to any temptation that may assail him. He now betrays the secret habits of his mind, and endows his imaginary companions with qualities in keeping with his own fancies. He has voluntarily lost his reason, and therefore both moral and intellectual perception are equally obscured; and he no more distinguishes vice from virtue than truth from falsehood. Thus selfish indulgence invariably terminates in complete stolidity and desolation. Though for a time sentimental, witty, or ingenious, as the natural character may determine, having no more control over his desires than he has over his dreams, the thoughts and language of the drunkard mix the sublime and ridiculous in chaotic confusion; and, having just power enough left in his reckless hand to pour another glass, his mad inspiration is at once turned into a mumbling idiocy, and then his

brain becoming thoroughly palsied, he falls under the table in a disgusting apoplectic stupor. The habitual drunkard is distinguished not only by the haggard dinginess and lividity of his features, but also by the perpetual obscurity of his mind. Ask him any question beyond the range of his daily drudgery, and he will fumble about in vain endeavors to control his brains, and set them in the order necessary to think and recollect. His ideas are all awry, and his associations all in confusion; for the habit of drunkenness renders the brain always unsteady and unmanageable, ready at the slightest mental effort to fill the man with most miserable sensations, and to haunt him either with direct terrors or with ludicrous images, mocking him into torment; hence his nerves govern him, and his human principles succumb so completely to the temptations of the pothouse, that he can rarely be cured without total abstinence, or by being shut up like a dangerous lunatic. That this term is not too strong we shall see, by observing the nature of that horrible malady which so often torments the habitual drunkard—delirium tremens. The following is a real case, and by no means of the worst character. A working jeweler was the subject; he resided in London, and, of course, his business required sedentary and intense attention. He found but little opportunity, and, in consequence of habitual fatigue, he felt but slight inclination, to take exercise in the air. If on the Sabbath he followed the stream along the dusty road, that, after a long journey, brings one in sight of green fields, his heart failed him at some public house within two miles of his home, and, in spite of his wife's entreaties, he would walk in for a rest, and, with three or four little ones around them, there terminate the holy day amid the debaucheries of the abandoned. Instead of refreshing his soul and body with rest becoming the Sabbath, the poor man hurried into drunkenness, and staggered home conscious

of his voluntary degradation. The next day would find him less fit for his work, yet he would fix himself manfully to it; but by-and-by he feels so disordered that he resolves to break away, and not to return to the shop for a few days. But instead of going at once into the country, where he might soothe his soul with verdure and peace, he seeks the excitement of companionship, and, as he saunters from street to street with a sottish comrade, takes a pint here and a dram there. Thus he proceeds for two or three days, not quite intoxicated, but just in the state in which the animal and the sentimental mutually waver in the balance. At length, however, his nervous system suddenly fails; the stages of intoxication rapidly hurry on, and he is taken to his bed *dead drunk*. After some hours of almost fatal stupor, he wakes up with a fever, burning hands, dull eyes, sallow cheeks, parched lips and tongue, confused mind, trembling limbs, aching loins, and tormenting heartburn that nothing will relieve. But the most overpowering of his sensations is a crushing weight of pain on his brain, with an indescribable sense of dizziness, as if about to fall from a vast height. This headache is so intense that light is intolerable, and every sound hateful. His temper becomes so irritable that his wife, who fondly watches him with the hope that he who once loved her will yet come to himself, and repent his unmanliness toward her, dare not remain near him any longer, for the sight of her now maddens him. Thus he passes his day of horrors, to which a night of terrible restlessness succeeds. Toward the next morning, he begins to rave in perfect delirium. Every muscle of his frame shakes violently; his mind is in mad confusion, yet he cunningly attempts to destroy his own life, and when baffled in his rage against himself, he turns it upon those who would hinder him, and the strait-waistcoat alone prevents his committing murder. With careful medical management he

recovers, but only for a short time, since some evil power holds possession of him, and compels him to return to the same condition on the first opportunity. In such delirium thousands die; how necessary then to meet the evil in its beginning, which can only be done by habitually abstaining from fermented liquors, as being perfectly unnecessary, and, indeed, essentially injurious to the functions of the body, unless under peculiar circumstances.

The term drunkard, however opprobrious, is still properly applied to all those who are accustomed to allay that craving for stimulants, which their abuse of the stomach invariably excites, by frequent recourse to them, so as to keep up a constant but not uncontrollable effect. This decent kind of drunkenness, however, leads to its own especial horrors; for when those who are subjected to it are deprived of the exhilarating and delusive cordial, they are apt to fancy and to feel a thousand evils which visit the confirmed hypochondriac from other causes with comparative mildness. A man thus unnaturally excited, when not under the influence of stimulants, is apt to feel as if he might expect death every moment: he seems to see the enemy close to him, and he looks and expresses himself as if grasped by the cold hand of some mysterious presence. I have seen what I describe —the decent drunkard's hypochondriasis. He starts, he roves about wildly, he breathes laboriously, he struggles for life as if he grappled with a murderer, and yet there is nothing to annoy him but himself, nothing wrong but the nerves he has abused. Sometimes these horrors seize him in bed. He springs up as if he were elastic, and had been suddenly released from the pressure of some great weight; but it is only from an internal sense of suffocation that he tries to fly. He gasps for air as if he could never have enough, and yet he breathes deeply. The fact is, his blood is poisoned, and can not be duly

vitalized; and, therefore, his brain reels with a feeling of vacancy, and his senses are all full of confused sensations, because the fine fibrils of their nerves are thrilling under the impressions of noxious atoms circulating among them; there is a terrible ringing in his ears, and a multitude of frightful and indescribable objects crowd around his aching eyeballs, which he can not refuse to see, for they are more visible in the darkness than in the light, and the light he can not bear. He sinks for want of food, but the sight of it disgusts him; and the burning pain in his stomach renders the mildest thing intolerable there. He cries for drink, but water does not cool him nor quench his thirst. Nothing but a return to the Circean chalice can for a moment charm away the misery of life, and that only fixes a curse more deeply on his soul. But the agonies of aggravated indigestion, jaundice, dropsy, and diseased heart are but a small part of the catalogue of ills to which those are especially liable who addict themselves to dram-drinking and fillips. In many cases, a peculiar paralysis comes on; the legs and feet become as smooth as polished ivory, and so tender, that the weight of a finger will make a man shriek. All power over the muscular system is gradually destroyed, and the wretched being lies, it may be for years, at the mercy of his attendants, quite incapable even of feeding himself. The mind, in these cases, being nearly idiotic, it is difficult to discover whether the suffering is really so great as it appears, from the cramps of the extremities, the convulsive twitchings of the countenance, and the moans and exclamations of the patient. It is, however, certain that these symptoms increase in violence until total darkness closes the horrid scene. Long before death arrives, however, the patient talks aloud of his former orgies, and re-acts, in thoughts and words, his solitary indulgences. Thus the degradation of his soul becomes visibly complete.

The abuse of sensual passion usually induces that feeling of exhaustion under which the temptation to take stimuli inordinately is strongest. Then the indulgence becomes almost irresistible; and of course, instead of qui eting the nervous system, it only substitutes one excitement for another, and brings the soul and body more thoroughly under the thraldom of morbid sensation, before the tyranny of which all sense of honor and morality at length is lost, and the miserable sufferer, while he cowers like a madman under the threats or persuasions of those about him, will yet rob his children of their bread to obtain a few more doses of the poison of which he is dying; and when disease confines him to his death-bed, he will bribe his vulgar nurse with his last shilling, and beseech her with his last breath, to procure for him another of the fatal draughts. Can, then, the causes of his most pitiable insanity be too fully studied or too fully met? Let every one who reasons see that he, at least, assists not to perpetuate the evil by encouraging the habitual use of stimulants; and if there be, in the doctrines and the disciples of political wisdom, morality, and religion, any power to stem that torrent of popular iniquity, surely here, in this country, and about our homes, we find sufficient scope for its fullest exercise.

The benefit of habitually abstaining from *artificial* stimulants can scarcely be better expressed than it has been by some sudden converts to a simple regimen in the name of hydropathy. From their rapturous language, describing their delights in the feelings of a new kind of life and vigor, one might suppose them to have just escaped the misery of a depraved existence, and to have found themselves, unexpectedly, in some poetic paradise. But there may be intemperance even in the use of water. The ecstasies of hydropathic converts, however, is due as much to excess of enthusiasm as to excess of drinking. Active exercise in fresh air, and a free use of cold

water, constitute a plan which every savage, unbewildered by quackish mysteries, knows to be wisest, discreetest, best for securing the blessings of bodily health. But let moderation be known in all things, and despise not the wisdom of Solomon, who tells us that wine has its uses, and strong drink is more suitable than cold slops and wet sheets for a man with a flagging pulse and a sinking heart. A deluge not only renovates, but also destroys; and the Maker of man never designed him to be amphibious, nor to keep his functions in forcible action, like a water-mill under a constant stream, but to enjoy life under a wise use of all that is good, since obedience to divine law allows of no extremes; and temperance implies *in mediis tutissimus*—an equal danger both from abstinence and excess.

It appears to be pretty clearly ascertained that narcotic poisons are akin to bitters, the latter only containing less carbon. Gentian and quassia, much used by brewers, taken in large quantities, act as narcotics, and the hop so manifestly partakes of the nature of both bitters and narcotics, that it may be classed with either. The Romans used to give something of the sort to those about to be crucified, for the purpose of blunting sensibility. This is referred to by St. Matthew: *They gave him vinegar* [bad wine] *mingled with gall* [χολη, some bitter], *and when he had tasted, he would not drink.* We commonly observe the effect of beer in the heavy countenance and obtuse understanding and feelings of those who freely use it. Some narcotics, such as opium, act directly on the brain, others on the sympathetic or ganglionic system of nerves, others on the spinal chord, and others, such as tobacco, operate on the nervous system generally. Hence diversified effects on the emotions and intellectual faculties. All those substances which soothe the nerves contain more carbon than hydrogen in their composition; they seem to hinder the blood

from being vitalized properly in the lungs, and Liebig believes that they actually combine with the substance of the brain and nerves, so as to alter their character. Now we can find no difficulty in understanding how the habitual and unnecessary use of such agents must prove injurious, since they produce an unnatural state of the instruments of energy, both as regards body and mind. As St. Augustin says, "How pleasant it is to be without these pleasures!" To forsake them, when accustomed to their action, is to be subject to morbid reaction, to continue them is to disorder every function; therefore, not to use them, except as medicines, is the only safe plan. We see that from the new nature, so to say, induced by habit, it must be extremely difficult for a person confirmed in their abuse to renounce them, a new and strong kind of appetite being created, which to resist is like refusing to yield to hunger or thirst.

Much might be said concerning the use and abuse of tea and coffee; but common sense is beginning again to prevail, and therefore we expect that the numerous nervous disorders due to excessive indulgence in these warm drinks will gradually wear away under a more judicious use of them. Chemistry seems clearly to have proved that the active principles of tea and coffee are precisely similar, and that their elements exist in such combination as, when moderately enjoyed, to favor the mental action of the brain with less risk than under other stimulants; therefore we can discern the wisdom of the Providence which has led to the almost universal employment of these substances in civilized society, and especially among those whose minds are most active. Therefore, let charity and trust in God's goodness command our grateful thoughts, and thus put scandal to flight, when we socially sip from "the cup that cheers, but not inebriates."

CHAPTER XVIII.

THE INFLUENCE OF PHYSICAL AGENTS ON MORAL STATES.

We habitually distinguish between our moral affections and our intellectual powers, because we discover a difference between right and wrong, true and false. Good and evil relate to affection, truth and falsehood to intelligence. Yet these probably are never practically dissociated, for as intellect is never exerted without some affection being excited, so neither can we enjoy pure reason without enjoying true goodness. Mental operations always influence our moral condition, and either confirm us in error and evil, or tend to restore us to rectitude and happiness. The will must always be at work, and thought be excited, if not directed by desire. Hence wisdom and knowledge, so "far from being one, have ofttimes no connection." The wise man chooses well, he has a right kind of love, and he wishes his mind to expatiate on objects under such associations and motives as God approves; in short, he desires his thoughts, so to speak, to coincide with his Maker's; and therefore the light that is in him, like the sun, diffuses a warm benevolence, brightening what it looks on, and blending earthly things in beauteous harmony while proving its source to be in heaven. But the man of mere knowledge is a shriveled miser, starving his proper affections in vain endeavors to satiate an appetite "that grows by what it feeds on." He accumulates ideas as if

only for the purpose of concealing them. We are made to be moved by desire, to shun or to seek; for will is never dormant, either in thinking or feeling; but we never think to good purpose without improving our affections. The connection between intellect and morality, however, is not sufficiently considered in our education, which, to be correct, must be conducted with especial regard to our physical constitution, as that of sensitive as well as reflective beings. The study and the statistics of insanity and of crime teach us an awful lesson concerning the gigantic evils resulting from ignorant mismanagement of the body in relation to the mind and the moral nature. The contents of the preceding chapter are a sufficient demonstration that mismanagement of the body includes immoral conduct; and indeed it can not be otherwise, since morality means the operation of right motives in controlling the actions of our bodies, and preventing their abuse, by respect for others as well as for ourselves; in short, morality is good manners; not the sweetness of assumed courteousness, covering a bitter heart—that is Satanic villainy; but the embodied habit of good feeling, which constitutes Christian gentleness. Insanity and crime are equally pitiable, and are both to be treated, in a great degree, physically, notwithstanding that both may originate in moral perversity, because, as the mind acts on the body, so does bodily condition and engagement react on the mind. Hence to render the situation agreeable, and to engage the senses and the limbs in such a manner as to divert the thoughts from wrong courses, is the secret of success in the management of pure insanity. Thus the maddest among the inmates of Bedlam are often guided back to happy associations, and even successfully directed to a higher standard of intellect and morality: and thus, too, the other outcasts of society, hardened criminals, may be and are often assisted to attain a noble excellence by

being separated from evil communications for a proper period, and furnished with an appropriate succession of objects and employments to think on and to enjoy. It is, however, proved that discernible material lesion, such as inflammation, softening, hardening, or other alteration in the structure of the brain, is not essential to insanity any more than it is to the impulses which lead to crime; but it is also proved that this malady is experienced almost exclusively by persons whose temperament has been mismanaged; for hereditary transmission, bad education and moral disorder, which are the common causes assigned, all imply that the will has not been directed aright in the use of the body. Of course insanity must be distinguished from the madness consequent on accidental injury, and also from delirium, frenzy, and idiotism, which are manifestly connected either with disordered circulation or defective formation of the brain. This, however, is not the place to enter at large on this subject; the design here is to show that impulsive and insane manifestation of intellect is associated with depravity of will, which invariably arises from the affections being diverted from their proper objects. This is seen very forcibly in that fashionable apology for murder—monomania, an intellectual delusion which those who are most conversant with the subject now suspect to be always consequent on moral dereliction. This we should expect, if the axiom be true, that the emotional powers of our minds, together with our affections, are always involved in the use of intellect, and we employ our intellects in keeping with the state of our passions—so that according to the predominant desire will be the direction of our thoughts. This looks exceedingly like a truism, and yet it is very far from being generally acknowledged as a truth. If, however, we look a little closely into the action of physical agents on the brain, we shall discover that the mental excite-

ment always involves the moral feelings, and that the intellect works with the affections, and therefore, according to the habit of the conscience will be the conclusions of our reason. Hence we shall understand the importance of instruction in correcting our wills in relation to sensation, and the propriety of rectifying desire by true knowledge and suitable employment; for according to the habits and principles in which the will is trained, must be our consent or resistance to any influence acting on the organization concerned in our passions. Thus our endurance of temptation will indicate the state of our faith and love as regards any object, and the test of our character will demonstrate that our condemnation is rightly determined by the use we have made of instruction and example, in the employment of our own bodies.

As a good example of intellectual exaltation in keeping with moral character under the influence of a medicinal agent, I quote the following case from Dr. O'Shaughnessy's account of the effects of Indian hemp: "In a lad of excellent habits, ten drops of the tincture induced the most amusing effects. A shout of laughter ushered in the symptoms, and a transition state of cataleptic rigidity occurred for two or three minutes. He enacted the part of a rajah giving orders to his courtiers; he could recognize none of his fellow-students or acquaintances; all to his mind seemed as altered as his own condition; he spoke of many years having passed since his student days, described his teachers and friends with a piquancy which a dramatist would envy; detailed the adventures of an imaginary series of years, his travels, his attainments of wealth and power; he entered on discussions of religious, scientific, and political topics with astonishing eloquence, and disclosed an extent of knowledge, reading, and a ready, apposite wit, which those who knew him best were altogether un-

prepared for. For three hours, and upward, he maintained the character he at first assumed, and with a degree of ease and dignity perfectly becoming his high assumption." Here we witness ambitious intellect acting out its character, as in a dream. The remembrance of this acting passed away from the consciousness of the actor with the excitement which occasioned it, as we usually find under such circumstances.

Van Helmont affords us another case. He declared that, after tasting some aconite, his head felt confused, and for two hours his intellect seemed to have deserted his brain, and taken up its residence in his stomach. On one occasion of mental transport, he states that he actually saw his soul in his stomach. This, however, is pretty strong evidence that he was deranged by the narcotic, though it is just as reasonable to suppose that a soul could see itself, as that we can, as some physiologists tell us, see every thing else, and yet be without any souls whatever. He had exhausted his brain by severe meditation concerning the soul's existence; and thus, according to a common law of the mind, often illustrated in dreaming, he seemed to see what he longed to be assured of. He says, "Magna mox quies me invasit, et incidi in somnium intellectuale satisque memorabile. Vidi animam meam satis exiguam sexûs tamen discrimine liberam!" Those who will take the trouble of reading all he relates of his visions, will find that he gained great moral advantage from them, notwithstanding the ridiculous aspect of some of his notions.

The inferences of the soul, whether during vigilance or sleep, are always according to its previous convictions, that is, its faith. Hence the delirium of the intellectual and religious maintains a corresponding character, and a mind fixed upon the peculiarities of any creed will find abundant evidences in its dreams to confirm the truth of what it already believes. The previous state of the mind

determines the nature of its visions; therefore we find such a variety of effects on the imagination by the use of the same agent. Another observer, being of an entirely different habit of thinking from Van Helmont, took a moderate dose of aconite, and experienced altogether a different state of mind during its operation. It first produced giddiness, which, suggesting ideas of peculiar motion, soon resolved itself into a sense of orderly movements among the objects before the eye; immediately these objects appeared endowed with life, and took the forms of well known individuals, who seemed to dance about in most beautiful figures, flinging a brilliant sunshine about them, while they moved in the exactest order, with all their movements measured by harmony of an exquisite kind, but seemingly composed of all the best parts of remembered airs. This vision was not of long duration, and was destroyed as if by a sudden loss of sight and memory. There was no tendency to sleep, but depression and fear came on instead; and, after several hours, an unusual irritability and obstinacy of temper succeeded, which, after a time spent in silence and darkness, was followed by a marvelous clearness of memory, combined with a vivid imagination, giving rise to ideas of ecstatic vastness, brilliancy, and promise, and hence with a tendency to prophesy all that was most desirable to a poet. In short, the aconite produced a kind of insanity, perhaps not very unlike that form of excitement which so many fancy to be the true inspiration of genius; but all that passed was in perfect keeping with the temperament and mental habit of the person experimented on, who was a young man addicted to the poets, and fond of company, music, and dancing.

The effects of a powerful stimulant medicine on the nervous system of a melancholic dyspeptic patient are well expressed, while under its influence, in his language to the author: "I used to feel," said he, "as if I

should never laugh any more, but I now feel as if I should never weep again. I am too hardened by misery for tears. I can't melt. I can feel agony: but can not think of it. I am filled with wretchedness, but I can not attend to it. I am too selfish to be happy, and my mind lives in my limbs." Here we see that the excitement itself was melancholy; but still the mind was evidently diverted from its habitual train of impressions by the operation of the stimulant upon the nerves of voluntary and emotional action.

This subject is worthy of especial study by those who are engaged in the treatment of insanity. Much has been done, but much more remains to be done, in adapting those remedies that act powerfully on the nervous system to the mental condition of the patient. The late Dr. D. Uwins was in the habit of insisting that he could, by the use of aconite and other narcotics, direct the current of thought in his insane patients almost as he pleased. This, however, was probably an enthusiast's unintentional distortion of facts, from looking at them through the medium of fancy. Yet certainly I must acknowledge I have seen some extraordinary results of his peculiar treatment.

Another case will assist us to arrive at some important practical conclusions. Dr. Gray, having taken a large dose of Deadly Nightshade, thus describes the effects:— "The slight delirium that followed the action of the narcotic was of a strange, yet not unpleasant kind. I wished to be in constant motion, and it certainly afforded me an infinite deal of satisfaction to be able to walk up and down. The intellectual operations, at times, were very vivid. Thoughts came and went, and ludicrous and fantastic spectacles were always uppermost in my mind. I was conscious that my language and gesticulation were extravagant, yet I had neither power nor will to do otherwise than I did; and, notwithstanding my

bodily *malaise*, the mind was in a state of delightful exhilaration." Many an insane person has been conscious of precisely the same state of feeling; it is therefore especially interesting to discover what was the condition of the body accompanying this mental extravagance. First we observe dizziness and staggering, and then cloudiness of vision, from partial palsy of the optic nerve. By determined effort of will, however, Dr. Gray could combat this for a moment or two at a time—a beautiful evidence of mental action on the state of the brain. The eye became prominent, dry, and exceedingly brilliant, with a fixed dilatation of the pupil. There was total suppression of all secretion. The feeling in the head was that of violent congestion, similar to that of a ligature about the neck, preventing the return of venous blood from the head. Here we have a poisonous state of the blood hindering its proper changes, and thence acting on the brain in an unnatural manner. From these facts we learn that change in the impulse to action may arise from change in the state of blood. The desire of exertion is the first effect of a stimulant; hence every voluntary movement is a pleasure while under its influence. The ideas suggested to the mind, by the peculiar condition of the brain, of course take their direction according to the habit of the individual temperament; but it is evident that the power of self-control is destroyed the instant a man, either from the rapidity of thought or the urgency of impulse, becomes incapable of correcting the impressions of this excitement by comparison with remembered impressions; he thus loses all sense of his proper relation to objects around him, and acts altogether under a delusion—that is, he is irresponsibly insane. It is also manifest, nevertheless, that even the false reasoning of such madness will be conducted according to the state of the conscience—that is, the predominant moral characteristics will still be evinced, what-

ever be the immediate impulse or cause of excitement; for no man thinks and acts voluntarily, but under habitual association of ideas, or as his experience of the past may dictate. While, therefore, we are taught by the records of crime and insanity so many lessons of humility and pity, because the mind is thus subjected to the disturbances of the physical economy, we also learn the paramount importance of training the will in the delights of moral and religious discipline; for, although all manner of sins arising from the provocations of a depraved body and an ignorant mind have provision made for their forgiveness, by the very means that produce repentance, and ultimately remove their causes, yet we see no remedy for a will that refuses to be restored to right reason and truly religious motives. But perhaps the most instructive fact in the case above stated is the mode which Dr. Gray adopted for his cure. An emetic and a cold douche to the head speedily put his artificial insanity to flight; and our reasonable inference is, that when we find our minds whimsical and inordinate, or in any manner impelled at variance with what an enlightened conscience would dictate, we may suspect something wrong in our management of the body, which we must endeavor at once to rectify, if we would enjoy the highest advantages of our rational existence. Imprudence—that is, want of conscientiousness, inflicts most of the evils which we attribute to Providence; and those who, by obedience to divine direction, learn to keep the body under control, find nothing in their path that can offend them.

> "Accuse not Nature, she hath done her part;
> Do thou but thine."

The effects of all narcotic poisons, as regards their influence on imagination and memory, are somewhat similar. The pleasures arising in the confused visions thus produced have caused poisons of that kind to be so

commonly employed to excite intoxication among individuals who are without steady intellectual pursuits, appropriate employments, or just notions of future existence, and whose habits, therefore, induce them to yield to the fascinations of a present pleasure, rather than, by self-control, to qualify themselves for larger happiness. Opium is one of the substances most frequently resorted to for imparting the enjoyment of a new mode of consciousness, which it effects by disturbing the chemistry of life to such a degree that the nerve-matter no longer duly subserves its purpose as a medium through which the soul exercises volition and perceives sensation. Those who desire to study the mental bewilderments produced by the habit of indulging in this narcotic, will find abundant matter for thought in the eloquence, poetry, and metaphysics, beautifully, but perhaps dangerously, mingled with the pathos of a fine soul, in the Confessions of an Opium-Eater. This work reveals the maddening fascination with results from a voluntary surrender of the faculties to the influence of this drug, and will serve to explain to us how it happens that a people like the Chinese, with excitable imaginations, but without the restraints of a divine religion, almost universally addict themselves to opium, and thus furnish Mammon, the god of nominal Christians, with a ready market for their iniquitous merchandise.

Chardin, the illustrious traveler, describes the effects of a decoction of poppy-heads (from which opium is procured), for the sale of which there are taverns in every part of certain Persian towns. "The drinkers entering these houses are dejected, sad, and languishing. Soon after they have taken two or three cups of this beverage, they become peevish and enraged: every thing displeases them, and they quarrel with each other; but in the course of its operation they make it up again." Then follows an illustration of a remark in a preceding page of this

chapter: "*Each one gives himself up to his predominant passion:* the lover speaks sweet things of his idol; another, half-asleep, laughs slyly at the rest; a third tells ridiculous stories; in a word, a person would believe himself really in a madhouse. A kind of dreamy lethargy succeeds this disorderly gayety, which the ignorant victims regard as a supernatural and a divine ecstasy."

The Thracians used to intoxicate themselves by casting the seeds of certain poisonous plants into a fire made for the purpose, around which they sat and inspired the narcotic fumes. There can be no doubt that the incantations of witchcraft and magic were generally attended with the practice of burning herbs of a similar kind, that by the aid of poisonous fumigations the imaginations of those who were subjected to them might be the more easily deluded; for when the nervous system is under such powerful influences, perception is confused, and the mind becomes delirious, and the soul beholds what it either hopes or fears. Thus, whatever fancies may be suggested to the victim assume the appearance of realities, and the wildest dreams are mistaken for facts. Hence we see, that the transition from the subject of intoxication to that kind of inspiration known to belong to the mysteries of heathen priestcraft is most natural. The ancients deemed certain temperaments essential to the reception of the divine afflatus, and the melancholic was considered the most suitable, especially when aggravated by rigid abstinence and the use of narcotics. The success attending such qualifications for the attainment of exalted spiritualism, may, therefore be easily accounted for. Such artificial modes of assisting mental abstraction have at all periods been resorted to. Thus Pliny informs us, that the soothsayers were accustomed to chew roots supposed to be of a certain species of henbane The Hindoos employ the Indian

hemp for the same purpose; and, in St. Domingo, the supposed prophets chew a plant called cohaba, that they may the better be able to look into the unseen world, and perceive the shadows of coming events. Sophocles calls the priestesses of Delphos laurel-eaters, because they were in the habit of chewing the leaves of that shrub before they mounted the tripod. The natives of Kamtschatka are said to use the plant *spondylium heraclium*, with a view to prepare themselves for dedication to their gods; and we are informed that the effect, under this notion, often produces an irresistible disposition to commit suicide.

The effect of such agents being modified by the previous temper and habit of the individual subjected to their action, we are taught much concerning the manner in which insanity, chagrin, irritability, and anger operate upon the brain, according to the knowledge and habitual feeling of the persons afflicted by them. Our thoughts, whether sleeping or waking, in derangement or in health, will be determined by the state of our affections. The objects familiarly regarded by us will, even in delirium and madness, be predominant; and if we yield our body to the unnecessary use of stimulants, it will only be to confirm those evil dispositions to which we are most liable.

In connection with this subject, there is another of great interest—namely, the alternations of mental action in correspondence with states of bodily excitement and exhaustion. It is commonly observed, that those persons whose spirits are easily exhilarated are also easily depressed; and those who, in an excited state of the brain, have their fancies crowded with images of a ludicrous nature, are, in the cold stages of their existence, haunted by horrors of the darkest description. Thus Cowper, under the excitement of unwonted sociality, wrote of John Gilpin's renowned ride.

The extremes meet in many instances, and the extravagant incongruities of romance, and of outrageous poetry, so much admired by many riotous minds as startling efforts of genius, are due to the dreams of indigestion and irritable brain, rather than to the might of a sober intellect rejoicing in the loveliness of truth. The beauties and sublimities of such jumbles of description and of sentiment as lead captive the untutored imaginations of so many youthful readers, may be found in the confused discourses of the madhouse to greater perfection than even in the circulating library; and the dreams of such readers, when excited by artificial stimuli, and by disordered affections, will suffice as specimens of the genius they adore; and which, indeed, their vanity assures them are proofs that they, too, may claim the inspiration of a harlequin Apollo. Such persons, in their unmeasured avidity for pleasure, keep their nerves in a state of constant tension; and thus, so to say, they respond in unmeaning tones, like the strings of an Æolian harp, to any air that may sweep across them.

We shall gather instruction of much importance regarding the discipline of the mind, if we reflect upon a few facts connected with the physiology of mental phenomena. Sir John Franklin informs us that "his party were so reduced by necessity as to allay the cravings of hunger by eating a gun-cover and a pair of old shoes." The sensation of hunger was suspended; "yet," he remarks, "we were scarcely able to converse on any other subject than the pleasure of eating." This tendency to dwell upon ideal enjoyments, the very reverse of the bodily condition, is curiously exemplified also in the fact, that the dreams of those starving men were, at this period, always of plentiful repasts. Mr. Moffat, having wandered some days in a desert of Africa, without food and drink, says, "We continued our slow and silent march. The tongue cleaving to the roof of the mouth

from thirst, made conversation extremely difficult. At last, we reached the long wished-for water-fall; but it was too late to ascend the hill. We laid our heads on our saddles. The last sound we heard was the distant roar of the lion; but we were too much exhausted to feel any thing like fear. Sleep came to our relief, and it seemed made up of scenes the most lovely. I felt as if engaged in roving among ambrosial bowers, hearing sounds of music, as if from angels' harps. I seemed to pass from stream to stream, in which I bathed, and slaked my thirst at many a crystal fount flowing from golden mountains enriched with living green. These pleasures continued till morning, when we awoke speechless with thirst, our eyes inflamed, and our whole frames burning like a coal." W. Kendell, in his Narrative of an expedition across the great Western Prairie, says, "The absence of bread increases the appetite for sweets of every description: often, while living upon nothing but poor beef, and not half enough of that, did fallacious pictures of confectionery stores and cake-shops pass before my dreaming fancy."

It appears, also, that bodily pain, when excessive, generally terminates in pleasure of a nature and kind just the reverse of that which causes the nervous exhaustion. Thus we are informed that Theodosius, a youthful confessor, was put to such exquisite torture for singing a psalm, that he hardly escaped with his life; but being asked how he could endure such extreme torment, he said, "At first I felt some pain, but afterward there stood by me a beautiful young man who wiped away my sweat, and so refreshed me with cold water, that I was delighted, and grieved only at being let down from the engine." These effects of nervous exhaustion may be illustrated by reference to those experiments on the effects of light upon the retina, first mentioned by Darwin in his Zoonomia. It is remarka-

ble that the contrary color is produced when the sight is fatigued; thus, if we look with a fixed stare at a bright green figure until a little wearied, and then look on a white surface, we shall see a red figure. If, however, we continue to look at the red until the nerve is thoroughly wearied, we shall see green. The direct sunshine quickly exhausts the optic nerve-power, and, by looking on it, we become for a time quite blind. Hence Milton's sublime figure:—

"Dark with excess of light His skirts appear."

It is probable that every part of the nervous system is subject to the same law, or mode of action; and the brain, under mental excitement, as well as physical, is apt to take a contrary condition, by which ideas are suggested to the mind, the very reverse of those which exhausted the attention. Thus the passions, when spent in indulgence, are apt to terminate in their opposites. Is there not reason to believe that those unnatural and excessive mortifications which, from mistaken religious motives, and, therefore, to be honored, men have, with noble fortitude, inflicted on themselves, with a view to destroy their sinful propensities, have in reality tended rather to aggravate them? The mind being constantly bent upon subduing some opposing passion, like the hungry man who can not eat, will be more abundantly supplied with the means of enjoyment and temptations in the visions of his weary vigilance. According to the mental engagement, will be the mental trial. Luther saw the Devil when religiously contending with the Pope; and St. Anthony met the Evil Spirit in the lovely form of one whose charms he had repudiated. Doubtless, those who expressly pray, hour after hour, against the prevalence of any particular sin, have that sin always present to their spirits, and a monotonous struggle after chastity will crowd the soul with pictures of tempting beauty, beyond the fascinations of

the Louvre. Abelard did not love the less for fighting against ideas; and Eloise saw him not the less because she looked upon the blessed Virgin and her child. Temperance, active employment, and diversified and proper objects are the only suitable remedies for perverse desires.

Creation is a system of antagonisms, and thus we may explain the mystery of our subject, by introducing a greater. There are opposing forces both in the spiritual and the physical world; and it is only in the diagonal between them that nature retains her standing: thus planets revolve in order, and souls on earth proceed in the path of light. Temperance in all things is the grand requirement; for, whether using the functions of the mind or the body, if indeed they can be separately used by us, what we are to avoid is the excess to which our uninstructed wills would necessarily lead us. We must learn moderation by intimacy with truth, and acquire safety by obedience to Him who can not err. Enjoyment will be lost in selfishness, and a wayward will begets weakness and confusion. The affectation of a righteousness that does not belong to nature increases temptation and danger, and captivity to lust is spiritual destruction. We can control one desire only by a greater: and if we would escape the tyranny of opinion, we must exercise faith; if we would not be led in subservience to men and evil spirits, we must believe God, and keep his commandments. To love Him, is to be superior to all power but His; but to be without regard to His will, is to be without dominion over our passions, and to be in danger of never regaining the proper use of our minds. The mainspring, or motive power of order is wanting, and the machinery of our bodies and of our minds, being without a regulator, hurries on in disorder, or suddenly stops. He who formed our intricate being alone can rectify it—Omnipotence alone can

restore His immortal creature from otherwise eternal ruin. What He wills must be accomplished; and He desires not the destruction of any man, but rather employs all agencies to induce the wandering spirit to return to rest, in the restoration of integrity and confidence.

CHAPTER XIX.

BODILY ACTION.

As the human mind is constituted for progress, and to find no rest in the past, but to be ever advancing to new perceptions, so its highest gratification consists in healthy action; and as the free use of our senses is essential to the full development of our intellect, so the intellect is never happily exercised but with some anticipated attainment ever in view. Consciousness itself is mind at work; and the sole delight of the spirit is in the exercise of power. Hence every idea associated with diminution of bodily activity is repugnant to our feelings. We fly from death to life, from inertia to energy, and set heaven in motion for our pleasure; for the soul was created to demonstrate the might of God in itself, by bringing matter under obedience to will, thus annihilating resistance, and resting only in the accomplished works of perfect goodness, and the satisfaction of the Omnipotent; which, in fact, must be the sole end of all action and all intelligence.

The muscular sense, or that which we exercise in using our limbs, is probably most requisite to earthly enjoyment; for, being deprived of this, instead of commanding, in the feeling of its own free might, the soul becomes consciously a prisoner and a slave. Will, without power, but aggravates the miseries of helplessness; and when we feel utterly incapable, every desire fails to disappoint, only because we can not hope. It is this feeling of advantage in the possession of muscular power

which causes us naturally to dread decrepitude, and to look upon the cripple with pity. Activity is also connected in our thoughts with our ideas of animated beauty; and, therefore, deficiency in any of the organs of our frame, by which action is effected, suggests unamiable associations, which perhaps are somewhat akin to those instincts so powerfully evinced among gregarious animals, and which urge them to drive the sickly and disfigured from the herd. This instinct is a merciful provision to prevent the propagation of deformity and feebleness. A degree of this instinct is proper to man; but, like his other instincts, it is to be reasonably directed. It will be useful to human society only when carried by men to the wise limit of avoiding the entailment of personal defects from parent to child. Where the ardor of natural love is not depraved by morbid sentiment, or by those sordid calculations which basely weigh affections with gold, the natural desire for healthy beauty and beautiful health will abundantly protect the personal interests of generations to come. The prevalent evil being thus diminished, reason will be well disposed to consider how best to ameliorate the condition of those who, by the unsearchable wisdom of the Creator, may still be permitted to enter life under the disadvantages of bodily curtailment. The existence of evil affords scope for greater good.

The Almighty has manifestly set some good in opposition to every evil, which good is destined so to triumph as that sin and suffering shall ultimately but exalt man's apprehension of Jehovah's unsearchable attributes. The possession of personal and physical advantage, however, does not always secure our immediate benefit, because the means of enjoyment will beguile us into folly as often as we seek pleasure at the sacrifice of principle; but while a perfectly formed body, rightly employed, will perhaps enable us to gain whatever of excellence this world can afford us, yet those who are deprived of such

facilities will still be enabled to attain a mental and moral superiority over all those who use the body merely as a means of luxurious indulgence, rather than of conquest over selfish propensities.

The influence of deformity of the body on the mind would afford an interesting and inspiring subject to an eloquent and ingenious thinker. Some infirmity of this nature has afflicted not a few of the notable characters of history. Nor is this surprising, since the circumstances in which individuals thus curtailed are placed act as stimulants to the mental faculties. Thus some, incapable, it may be, of locomotion, shrink away from the gaze of their more favored fellow-beings, and having no resource but in thought, acquire such familiarity with the motives and operations of their own, and hence also of other minds, as to exhibit philosophy in its most amiable forms. They detect the cause of moral failure, and often present the meek and sublime example of moral and religious exellence under the most abject of bodily disadvantages. Thus, in a family we frequently find the deformed or the disfigured making more than amends for deficiency in personal appearance by superior intelligence and mental loveliness. Where we witness this, we ought to love and admire, for there we behold heroic beauty. The love of approbation frequently exhibits itself in a painful manner in those who labor under bodily defects or distortions; and it is no unusual thing to observe the children, and even the men, whom nature has rendered comparatively unfit for any particular activity, endeavoring to show especial skill in that very respect in which they are least calculated to shine. This seems to arise from a desire to persuade themselves, as well as others, that they neither feel their deficiency so much, nor are really so deficient as may appear; and indeed it is the result of a benevolent law of our existence, by which the direction of the mind thus

makes some amends for its want of full accommodation; and the disposition to do the best with defective means is certainly the very best method of improving the power which may be possessed. Hence it so frequently happens that the most unlikely persons are found the most efficient. The effects of Byron's club-foot on his character and conduct pointedly illustrate these remarks; for, from a boy, he was proud of his agility as a jumper, and took every opportunity of showing it, while by these constant endeavors the evil was greatly diminished. The morbid regard for appearance which stimulated him to assume extravagant, because unnecessary, modes of setting off his manliness may, perhaps, be traced to his foot; and it is even probable that the personal nature of his poetry, and the earnest portraiture of so many forms of beauty and heroism in his writings, may have proceeded from the constant and excessive consciousness of himself, which his personal defect seems to have produced. The loftiest education of the will is necessary to preserve an individual, subject to congenital or accidental defect, from moroseness of temper. His selfhood is interfered with in the most trying manner; hence fretfulness and discontent are natural consequences. If one so situated meet not the consideration to which his position justly entitles him, conscious of the neglect of those whom he desires to love, he will, perhaps, lose his allegiance to society by seclusion in his own wretchedness, or, if he can, he will immure himself, like the Black Dwarf described by Sir W. Scott: a sensitive and suspected man, surrounding himself with granite barrenness and solitude, as preferable to the cold hardness of human beings, though he still hoards in his heart the tenderest sympathies, and is ready, when circumstances shall demand it, to evince all the distorted energy of a mind matured by disappointment and solitary thoughtfulness into enormous vigor.

Many are the examples which history presents of the victims of deformity struggling against personal insignificance, and rising above the prejudices of their times till the public have felt that the mind is the man. The soul is not cribbed in the lowly chamber because the body allows it not a place in courts or camps. Æsop, though a deformed slave, gained a proverbial mastery over other minds, and taught the very brutes to speak that reproving wisdom, which men prefer in disguise, since they would rather learn from fables than from facts. A partial arrest of bodily development seems rather to favor that of the mind, provided the brain be not defective. This may be accounted for by supposing the existence of a fund of nervous energy not demanded by the body, and to be used by the mind. Thinking is generally conducted at some expense to the nutrient powers and nervous energy, and, therefore, perfect quiescence of body is necessary to profound thought. Of course, where nature enforces physical rest, and still confers abundance of brain and intellect, there thinking may be continued with the least fatigue.

Our moral lesson, from this part of our subject, is the propriety of making the most of our opportunities for mental advance and improvement, since we see that those who have been stimulated by a feeling of necessity to keep watch over their own thoughts have gained advantage even from impediments. We are accountable in proportion to our facilities, and are inexcusable if we suffer the body to conquer us by those very endowments which are intended to secure the victory to our souls. Inaction and exhaustion are equally to be dreaded, since both engender irritability, and alike disqualify the mind for proper attention to surrounding objects, by causing it to dwell upon the discomforts of self. But there are many other thoughts arising from this subject, a few of which may profitably detain our attention. Action ex

presses character. Every passion possesses the muscular system with a power peculiar to itself; hence it is expressed in the features and in the attitude. By some mysterious law of sympathy, association, or suggestion, it happens, that if the soul merely imitates in action the appearance presented by any passion, the nerves which are called into operation for that purpose become so excited that they, in return, are apt to fix the mind for a time in that direction, and the will is thus often mastered by the state of its own instruments, though that state be produced by voluntary exercise; and he who began by enjoying the mimicry of passion, at length feels the reality of its power. Hence it happens that pugilists and gladiators, in the fullness of their bodily energy, find it extremely difficult to keep their tempers during their preparatory sham-fights; and, therefore, systematic trainers recommend their lusty pupils to go regularly to church, not for the sake of religion, but to quiet their nerves by a sort of physical sympathy with peaceful and devout persons; for it is found, that to be in the midst of a worshiping assembly has a tranquilizing influence, even on the tempers of those who know nothing about godly motives. This fact shows the brutalizing effect of calling the organs of defense and destructiveness into such violent action. Two dogs at play exemplify the subject: they gambol around each other in quite a merriment of defiance; they snarl, they bark, they bite, with an amiable restraint on their canine teeth and propensities, until, in the excitement of his nerves, the more sanguine dog nips his friend's ear a little too sharply, and instantly their mutual forbearance is at an end, and their play-fight ends by their fighting in earnest. So the dogs that delight to bark and bite teach us a lesson that Dr. Watts has forgotten to mention. It is better not to allow our fighting qualities to be called into play, lest, like controversialists and prize-fighters, we should

endanger our safety by losing our tempers. The only justifiable cause of war is a love of peace. Christianity converts our organs of destructiveness into instruments of benevolence, our swords into ploughshares, our spears into pruning-hooks.

The influence of the body on the mind is well shown by the very same evidence that proves the superior influence of the mind on the body. The soul calls the nerves into action, the medium of mental manifestation is stimulated by the will to such a degree that at last the will is overpowered by its own effects. Thus we see that actors of fine conformation are sometimes overcome by the feelings which they imitate. It is said that Campanelly, the physiognomist, was as remarkable for his power of imitating the expression of another's features as in reading their characters; in fact, it appears that his sagacity in detecting the peculiar dispositions of others arose from the facility with which he mimicked their gestures and the play of their features. By thus composing his body as much as possible to their likeness, he found certain states of mind excited by which he was enabled to detect the thoughts and dispositions of those whom he imitated. On this fact Burke remarks, that he had himself observed his mind involuntarily turned to those passions whose appearance he had endeavored to represent in his own person. It is, indeed, hard to separate the passion from its correspondent gestures; for the consent of the will to the appropriate action is the embodiment of the passion itself, and a realization in feeling of that which otherwise exists but in idea.

To imitate evil is to be evil; and so it is, also, with approval or pleasure to witness it; for the sight of passions personally represented excites a corresponding sympathy in beholders, and therefore philosophy agrees with religion in regarding it as unreasonable to encourage mere stage-players. Dramatic extravagance, however,

is sure to be popular, until the public mind becomes accustomed to contemplate the more instructive and impressive scenes of actual life and the wonders of creation. True history is the best drama, and the fulfillment of duty is the most impressive.

All motion—that is, visible action—excites our sympathy, because it always has some relation to our own muscular system, since we are called to move according to the movements of things about us. It is connected with our instinct of self-preservation; hence we are endowed with the faculty of associating in our minds such objects as move in similar manners, and they recur to our remembrance with a certain sense of ourselves being agreeable, or the reverse, according to the state of our passions at the time that we either witness or remember them. Our intuitive perception of relative position is connected with that sense of our own bodies which we all possess, for in relation to ourselves we refer the position of all other things. Some reflection on this subject is demanded, if we would understand how to regulate the association of our ideas. Our faculties are constituted to correspond with objects in relation to time, motion, and position. Thus we recall ideas in an associated manner, according as the objects which first produced the ideas stood with regard to each other in these particulars. For instance, we remember the name of a thing the better if we see the thing and hear it named at the same moment; and, therefore, if the qualities of any substance be demonstrated before us in order, we shall most likely associate those qualities with the substance whenever we see it, because ideas impressed together usually recur together. Language is founded on this association of ideas, and that person will generally experience the greatest facility in acquiring language, and also in employing it, who most habitually connects words with objects and with actions or states

actually known or experienced by himself. We are sure to remember most readily what most engages our feelings, and that not merely as a bare fact, or thing done within our own knowledge, or vividly imagined by us, as experienced by others, but the fact will also recur to our minds with all its associated circumstances.

If, then, we would train the intellect to good purpose, we must choose wise associations; and, above all things, remember that wisdom, as Solomon says, is the principal thing; by which, I understand him to signify, that the education of the affections is the beginning, middle, and end of right discipline, since ideas recur with controlling force in our reasoning just in proportion to the power and the peculiarity of the passion with which the ideas were first impressed on our minds. Those thoughts which are connected with personal affection will outlive all other thoughts, or, at least, will be preëminent in their influence on our conduct, and that because it is a law of our bodily existence that no personal feeling can be experienced, either directly or sympathetically, by us, without producing a tendency to action. Affection —personal feeling—governs the will itself, and therefore regulates all the associations both of the body and the mind. Even God himself exerts no influence upon our morals, but as He is revealed to us in personal relationship. Our ideas of an undefined might are merely nebulous creations, and can never render us rationally devout; and we might as well adore a thunder-cloud as a God without a personal correspondence with ourselves. It is this indefiniteness of notion, connected with the Word of God, which causes many to find what they call devotion such a heavy servitude. They, for a time resign their understandings to a mysterious apprehension which leads neither to love nor knowledge; and, therefore, it is no wonder that such persons resort to their devotions as little as possible, and that just for decency's

sake. True worship, however, is not hard work, but, indeed, an unutterable delight; because in it the enlightened spirit of man recognizes a true object of affection as well as of adoration—a personal Deity, who, while enforcing the ordinances of the boundless universe by his presence, still makes known his will in life, power, and love, as the immediate friend and patron of each believing man.

CHAPTER XX.

THE INFLUENCE OF EXERCISE AND AIR ON THE NERVOUS SYSTEM.

The depressing passions lead to bodily inaction; the exciting passions induce physical exertion. Whenever hope is strong, the will is busy with the muscles, and calls the heart and lungs into free play; hence there is a disposition to set about the accomplishment of desire; and, therefore, as long as the body is vigorous, a few impediments only strengthen determination and heighten enjoyment, since the act of overcoming difficulties is among the chief pleasures of conscious power. Bodily inactivity tends to produce gloominess of mind and moroseness of temper; while exertion in the open air promotes the better feelings of the heart, and brightens the intellect with an inward sunshine. The manner in which these conditions respectively effect the mental change is explained by reference to facts stated in connection with those of the circulation of the blood. This essential fluid is vigorously propelled along its numerous channels by the proper exercise of a healthy person in pure air; every organ is thus excited to the full performance of its functions, and the living stream being more abundantly vitalized by the absorption of vital air, the brain is more copiously furnished with the stimulus which its high offices demand. Light, warmth, life, are thus transmitted to the nerves; the soul is put into suitable relation to the elements of this glorious world; all the senses are rendered fitter for their proper service; the soul becomes alert, and the measure of

earthly—that is to say, animal—happiness is full. The state of the blood, however, has probably more to do with this kind of enjoyment than either locality or association. When the Honorable C. A. Murray had been living for some time entirely on buffalo-beef, among the Pawnee Indians, his body got into the true savage training; and in the excitement and liberty of the wilds, he enjoyed the perfection of his animal nature. The kind of intoxication arising from over-stimulating blood is well expressed by him. "I have never known," he says, "such excitement in any exercise as I have experienced from a solitary walk among the mountains: thoughts crowd upon thoughts, which I can neither control nor breathe in words; I almost feel that I am a poet, but" (as Byron beautifully expresses it) "I 'compass the god within me;' all the beloved dwellers in the secret cells of my memory walk by my side; I people the height of the hill and the shades of the forest, not only with those whom I have known, but with all my friends from fairy-land; and in these illusions of my waking dream I forget time, fatigue, and distance, and—sometimes lose my way."

This highly animalized state of blood is not, however, altogether poetic; but the ferocity, as well as the hilarity of a beast of prey, may well be imagined as sometimes associated with it. A man living solely on beef, as the Indians generally do, and full of freedom and fresh air, has blood very nearly approaching in chemical character to that of a lion, the fibrin and red globules being more abundant, in proportion to the *liquor sanguinis*, and the temper of his mind approximates to the indomitable savage. If he be not well informed and habitually disposed to reflection, of course the chase affords him the highest delight, the state of his circulation renders him sudden and quick in quarrel, and while his will remains wildly selfish, he can not but be unrelenting in his ani-

mosity, though his heart may cling to those whom he instinctively loves, like a wolf to her whelps. Without exercise of a violent kind, this state of blood is apt to become intolerable, because it rouses the animal instincts to such an excessive degree, that reason becomes perplexed and confused by innumerable sensations, which she finds no means of subduing by demand on thought, since the nerves of volition and emotion are unduly excited to reflex action, and thus the balance of brain-power, by which the mind maintains dominion over the body, being disturbed, the animal is apt to prevail ever the rational, and the man to behave like a brute. But exercise, like abstinence, will moderate the demon within him; and thus the sportsman, who shoulders his gun in the morning, as fierce as if about to have a fit of the gout, will return in the evening, after a day's tramp through slush and mire after snipes, with a meek and smiling face, quite fit to meet his pleasant wife and children. Thus, then, it appears that a person under the influence of highly stimulating blood, finds all the organs of especial passion ready for action; but happily, the tendency to action is, under these circumstances, not usually limited to a part, but the whole muscular system is roused, and both *cerebrum* and *cerebellum*, both the *exciting* and the *restraining* powers, are called into exercise, for the purpose of regulating the muscles. Whatever contributes to particular vigor in a healthy person commonly increases general power; but it happens that if one set of organs, as, for instance, the muscles, be weakened either by disease or by disuse, such stimulants as would in health cause a disposition to exercise, will now, especially in those accustomed to idleness, produce a great excess of passionate impulse, but without a corresponding power of diverting its intensity by bodily exertion; and thus, disorder of the passions, in those whose minds are ill trained, is likely to become habitual,

and therefore, at length, quite uncontrollable; because the will, not being governed by holy motives, submits without a struggle to its greatest degradation.

In connection with the facts which prove the influence of bodily employment in diverting the feelings, it will be interesting to reflect a little on that debility of brain which accompanies melancholy. This is most frequently met with in those who have been accustomed to seclusion and sedentary employment. The blood is usually too fluid in this disease, which is very apt to occur in persons of fibrous constitution, without fat and with dark hair and eyes, whenever such individuals are brought by any means into a state of debility. They are naturally and habitually strong-willed, obstinate, prejudiced, determined, and are, therefore, liable to be excessively distressed whenever the attainment of their desires is rendered impossible. The malady is often preceded by intense sensibility without proper opportunity of relief by social activities, affectionate appliances, and such varieties in the uses of the body as diminish irritability of the brain. This state may be induced by a powerful moral impression exhausting the sensorium by extreme vigilance and troublous dreams. There is a case of this kind related by Esquirol—a young lady who had been the playmate of the unfortunate Duke d'Enghien, and who, after his execution, became incurably melancholy, and continued to sit gazing fixedly opposite a window, as if watching for him whom she loved. The brain, in such cases, becomes incapable of any steady impression but that which wearied it into the fixedness of disease. Some one idea seems to be indelibly graven, so to speak, on the structure of the brain, and the mind continues to act only in this direction, because the nerve-fibrils refuse to take any other. The soul can not place itself in happy relation to the external world: it perceives only one state of things in connection with itself, and therefore patients

thus afflicted complain that they are without affections, and altogether worthless. Their excessive conscientiousness, however, proves their affections to be intense. Still they repel attention from themselves because they feel unfit either for love or for friendship. They pass dark judgments on themselves, and expect the Almighty to deal unmercifully with them. They often entertain a notion that they are to be peculiar examples of divine indignation, and that, since hell is too good for them, some punishment, *extra limites*, is to be invented to suit their case. Here I will dare to state that the worst cases I have ever seen were of persons who had been trained from childhood with perverted views of the evangelical scheme, and with what appears to me to be the horrible belief that God has made and predestinated the majority of mankind for eternal destruction, a statement surely exactly the reverse of the truth; for does not the Bible affirm that God wills not the death of a sinner, but that all should repent and be saved? This melancholy affection is certainly connected with loss of energy in some part of the brain, induced by wrong habits both of thinking and acting, and it seems much to depend on the circulation being too feeble to restore tone to the nerve, or to supply energy to the muscles. Probably there may be sometimes a defect also in the materials of the blood. Thus the feeling of inability begets an idea of unwillingness, and therefore the highly sensitive patient constantly condemns himself because he feels no lively sensations; and, as if his state were entirely his own fault, he fancies the Almighty has left him to judicial hardness of heart, or set him forth before men and angels as an example of justice without mercy. In this tremendous gloom of soul the rational faculties all become obscured, and therefore, as the natural result of despair, working only with blind instincts and terrors, many destroy themselves. Well may we say, when reflecting on this de-

sertion and desolation of the human spirit, clouds and darkness are around the throne of the Eternal. The Christian, however, looks closer to that throne, and there beholds the rainbow in its harmony of light, and expects Him who sits thereon once more to come forth and vindicate the ways of God to man by showing how it is the business of Omnipotence to reconcile all contradictions, and to call light out of darkness, life out of death, good out of evil, and to accomplish whatever our darkened reason would now call impossible.

Regular exercise, variety of employment, new interests, and judicious medical treatment, are required for the cure of melancholy. The disease tends to convert a living and once energetic man into a still, stone-like image of despair; but words of life must be constantly whispered in his ear, for an appeal to the beclouded soul often calls it back into visible action and enjoyment. Kind words being dropped incessantly, at length vivify the petrified features; the statue, so to say, begins to smile, and speaks and laughs, and then bounds across the green-sward with his children at play, metamorphosed into a happy man, wondering at his double nature, although happily the dreams that haunted his darkened spirit vanish from his thoughts with his return to light. If we can but get the body into vigorous action, the spell is often broken:

"Throw but a stone, the giant dies!"

There, however, is the difficulty—the arm refuses to raise the sling. Dr. Mead relates a case which shows us how we may take advantage of foibles and mental habits to rouse the sluggish spirit into activity. A hypochondriacal student of Oxford, after a life of bodily indolence, imagined himself on the point of death, and ordered the passing bell to be tolled, that he might hear it before he died. He had been fond of bell-ringing, but finding it now most execrable, he leaped out of bed, and

hastened to the belfry to show how the bell ought to be rung; he then returned to his room, that he might die decently. But the exercise had cured him; and having been once diverted, he could now continue to attend to other subjects than his own morbid impressions. From that time his reason and health returned together.

A degree of bodily monotony, or quiescence, is necessary to concentrated attention. To think intensely we must be still; for memory will not yield her treasures to our demand, except when our wills are fully fixed upon obtaining them. Reflection is motionless. A slight exercise of the body is, however, favorable to imagination. A saunter in the sunshine among the hills, with here and there the music of living waters, the song of birds, the garniture of woods, the far off sea, like a brighter part of heaven, and the clouds resting on the horizon like mountains, presenting a pathway to the skies—this is the poet's paradise. But his inspiration is not in outward nature only, but also in his blood. A balmy and dry air, with just that degree of exercise which excites a glow, will more enliven his fancy and heighten the color and distinctness of his conceptions than any sights and sounds, without that warm awakening of his brain which a gentle walk, under such circumstances, will produce. It was thus that Byron felt the grandeur, the beauty, the pathos, the daring, and the darkness which, in the stillness of the evening and of moonlight, he mingled with the memories of Childe Harold. Thus, also, the sublimer bard who relates the story of angelic and human revolt, when his sight was quenched, recalled to the vision of his soul those ideas which crowded on his brain during the days of his activity.

But it is almost impossible to carry on a train of close thinking while the body is powerfully employed: the hurry of the circulation, the demand made on the brain for nervous energy to act on the muscles, and the inten-

sity of attention to the body itself, almost preclude the power of attending to ideas with any precision. It is from this cause that we find certain sedentary occupations so favorable to the development of the mind. Thus the shoemaker's attitude and employment seem peculiarly adapted to encourage thinking, if we may judge from the multitude of self-taught men whose minds have been set in tune while hammering at the lapstone. Village tailors, too, are thinking men; but the journeymen of towns are apt to lose their intellectuality in political and social squabbles, in consequence of being shut up, to corrupt each other, in small rooms without proper ventilation. Enlargement of mind under such circumstances is nearly miraculous.

We may here turn a little aside briefly to consider a kindred subject, and one involved in exercise—namely, the influence of air on the operations of the mind. But first, it will not be out of place to say a word or two on certain relations between the brain and the lungs, which, although not adverted to in any popular work, are, I think, of great interest and importance. The value of the nerve-matter in the economy is beautifully proved by the remarkable provisions made to preserve it from injury during the motions of the body. The structure of the brain is so delicate that our slightest movements would destroy its integrity, but for the manner in which it is protected by dovetailed bones, by its three membranes, by partitions, by muscles, and by being placed on the summit of the elastic vertebral column, so that the shock of every step might be well diffused. But the fluid, which on all sides and in every crevice surrounds both the brain and the spinal chord, is perhaps most essential to their safety; and it is to this that I would now confine my observations. A close investigation of the relations of this fluid induces me to infer that it is especially acted on during exercise. Experiments have proved that

the motions of the heart and the act of breathing would be attended with inconvenience to the brain were not this fluid provided, since both the contractions of the heart and the movements of the lungs are seen to communicate impulse to the brain; for it is raised with the systole and depressed with the diastole, and it rises on breathing out, and it sinks on drawing breath in. Now we find that the effects of these motions, which, of course, are most violent during strong exercise, are modified by the quantity of this fluid which surrounds the brain and spinal marrow. When it is less, the influence of breathing or the motion of the brain is less. Dr. Ecker explains this fact to us, by showing that, during the *inspiration*, the blood driven into the arteries in passing from the heart, being hindered from returning, accumulates, or is delayed in the veins of the brain, and thus displaces a proportionate quantity of the surrounding watery fluid toward the base of the brain, which fluid then enters the spinal canal. When the left heart contracts, it sends a larger quantity of blood into the carotid and vertebral arteries, and thus causes an elevation of the brain with every pulse. The motions dependent on the action of the heart are much weaker on the spinal chord than on the brain, while those connected with breathing are more constant and considerable on the former, from the more powerful distension of the veins of the spinal canal, while in the act of *expiration*, or of passing air back from the lungs. We see, then, how this fluid serves the great purpose of regulating the vascular fullness of the brain; and thus we discover more of the important influence which the circulation of the blood and the mechanism of respiration exert over the nervous system, and how intimate is the relation in which they stand with regard to each other and the action of the whole body. Our inference concerning the value of exercise in modifying the state of the motions and the intellect may be antici-

pated from a view of the above facts, since it is manifest that, in order to keep up the proper alternations between the brain and the spinal chord, and between the heart and the lungs, it is not enough to breathe pure air, but it is also necessary that it should be *deeply* breathed. It is well known that all fluids in motion generate electricity; and, therefore, we can not doubt that the motions of the fluid of which we have written must also generate it, and, of course, may thus be of further importance in maintaining nerve-action. The connection of this fluid with sleep and activity, and also with emotion and thought, would be an interesting investigation; but as we must proceed with our remarks, with a view of being practical rather than speculative, we will again look a ittle into the effects of air on the brain, and thence on the mind. The air of the atmosphere is the only one fit to be breathed by us, and, therefore, the purer we can get it the better. Oxygen, or, as it used to be well called, vital air, is the most active agent in promoting the necessary changes of the blood by respiration. Somewhat more than a fifth part of the atmosphere is oxygen. If the vital alterations of the body be chiefly effected by the action of this substance, received through the lungs, we should of course conclude that every thing which lessens its quantity in the air we breathe, or in any manner impedes its action on the blood, must so far disturb life, sensation, and thought, by disqualifying the brain, and thence all the body, for the use of the mind. In short, a man will be speedily poisoned by his own blood if it be not duly oxygenated. Narcotic substances seem to operate on the body by interfering with the affinity existing between the blood and the air, allowing the accumulation of carbon or other noxious agents in the circulating fluid, and thus arresting the action of the nervous system. On this principle, every kind of intoxication disturbs the voluntary operations of the mind

by poisoning the brain, and thence impeding the influence of the will upon the circulation by preventing its control over the nerves of sense and emotion. Carbon and hydrogen, which abound in fermented liquors, are removed from the blood in the act of breathing; and these appear to be the chief substances which, in various combinations, tend to render the air, as well as the blood, deleterious. Hence we find that where a number of persons are crowded together in too limited a space, or without proper ventilation, either rapid suffocation takes place, as in the Black-hole of Calcutta, or else, the poison acting more slowly, nervous languor, mental confusion, and putrid fevers are produced, as in the cellars occupied by the poor in Liverpool and elsewhere. Jail-fever was a horrible malady, originating from a number of prisoners being shut up in close cells to gasp for life, instead of being actively employed for moral amendment.

The horrors of the Black-hole of Calcutta are often referred to, but yet few persons know their particulars. One hundred and forty-six gallant soldiers, in full health, were thrust into a room only eighteen feet square, having only two small windows at one end. A burning fever soon raged among them; they panted for breath, they were all delirious, they raved in vain for water, water, water! But it was air they needed. Their bodies generated a pungent, ammoniacal gas (hydrogen and nitrogen), which suffocated them, and in the morning only twenty-three were alive. In the midst of this awful scene, one beautiful fact appears: when about one third of the number were dead, and the remainder were madly pressing upon each other toward the windows, the commanding officer, who was greatly beloved by the men, entreated to be allowed to retire from the window to die; they all instantly gave place to him, and when afterward he made another effort to reach the window, crying, *Water, for God's sake!* they all, with

one voice, cried, *Give him drink!* Nor would one of them taste a drop till he had enough. How wonderful is the command of an amiable mind! Another instructive fact in connection with the Black-hole is, that all those who survived the imprisonment had putrid fever immediately afterward — a circumstance which throws great light on the nature of that disease. These facts also explain the madness and death of such a large proportion of the slaves stolen from Africa, and packed into vessels without room enough even to draw a full breath. A third, or even half the awful cargo used not unfrequently to perish in a state of delirium; and it is to be feared that, in spite of busy philanthropy, the horrors of the middle passage are scarcely diminished. O thou who hast revealed thyself as a merciful God, how shall the merchants in human blood be burnt to the soul with self-abhorrence, when, in the coming judgment, He who said, *Love thy neighbor as thyself*, shall show them *His wounds!*

The application of the foregoing facts to our subject is sufficiently manifest. If we would preserve our nerves in a state to favor mental exercise, we must insure our access to pure air. It is not enough to be guided by our senses in this matter; for, unless we are supplied with fresh air at the rate of at least twenty cubic inches for every breath while tranquil, and twenty-five while in action, we shall be in danger. Think, then, of the perils of the crowded routs about town. Without them the fashionable London physicians would be ruined.

There is a great probability that the temper of an assembly is often vastly influenced by the state of the air which it breathes, and to talk of a moral atmosphere is not altogether a figure of speech. It is certain that a crowded audience is usually most excitable at the commencement of a service, and the most attentive toward its close; and it not unfrequently happens that at the end

of a long sermon the flushed faces and hazy eyes of the congregation too often indicate that bad blood is adding its influence to aggravate the mental confusion produced by a disorderly discourse. A physiologist may reasonably inquire, whether the foul air of St. Stephen's have contributed to intensify the ill feeling of parties, and, by causing bad humors, have led to the enactment of bad laws? This question is not quite fanciful, since it is well known that *malaria* generally distempers the mind as well as the body, and therefore we may, without impertinence, hope that science will yet secure the credit of improving our legislature by supplying the lungs of its orators with better air. That the ferocity sometimes displayed among them may well be attributed to the effects of indigestion and rich living, aggravated by *malaria*, is rendered very probable from many prominent symptoms. But it is still to be apprehended that, unless inspiration can be obtained from a higher source than the Victoria tower, the parliamentary palace will continue to exhibit any thing but the influence of the pure air of heaven. The case of our national orators is quite in keeping with a fact with which the police of Buenos Ayres are well acquainted — namely, that quarreling and bloodshed are much more frequent when the wind blows from the north. Sir Woodbine Parish informs us, in his narrative of a visit to that place, that a sort of moral derangement prevails while that wind continues. He relates that a gentleman, of amiable manners under ordinary circumstances, was so affected by this wind, that, whenever it prevailed, he would quarrel with any one he met; and he was at last executed for murder, after having been engaged in street-fights, with knives, at least twenty times. This wind produces headache and disorder of faculty to a great extent, and, of course, leads to increase of crime with all classes of persons who are accustomed readily to yield to their

bodily impulses. No doubt the cause, as regards Buenos Ayres, arises from some *malaria* engendered in the marshes over which the wind passes. That the cause is chemical is proved by its effects on meat, which soon becomes putrid when exposed to it. The milk also quickly spoils, and the bread baked during its continuance is always bad. These facts suggest an extensive subject for consideration — namely, the influence of climate and geographic peculiarity on mental character; but this, though so fertile and interesting a field of inquiry, can not be now entered on. The few sentences on the subject contained in the ninth chapter of this volume will suffice to show its importance. The science of atmospheric purification presents itself in all its vast dimensions when we consider the immense tracts of land which are rendered uninhabitable by man, or, at least, highly noxious to Europeans, in consequence of their being so abundantly productive of *malaria*. Civilization and Christianity are literally arrested by the powers of the air, and the dark places of the world are preserved to the dominion of malignant spirits, because the earth is allowed, by ignorance, to lie waste in her rank fertility. The miasmata arising from the swamps along the course of the Niger, while they possess the power of speedily destroying the life of adventurous and enlightened Europeans, seem only to favor the exuberant growth of the worst passions in the degenerate nations or tribes that are born to dwell amid their constant influence. But knowledge shall everywhere prevail, and fertility, now running wild, being at length directed and controlled by man, shall cause the richest natural blessings to abound in lands at present teeming with the fruits of that curse which fell upon the soil because of man's disobedience. It is strange that vegetation should bear in its decay the bane of human life, and that the verdure which hides death should yet

scatter pestilence through the air. The very elements of life thus war against man; but man must yet conquer: he has received a commission to subdue the earth, and a will and a wisdom are inspired within his soul by which he must accomplish it. And not the least among the many wonderful coincidences of scientific advancement which favor the subjugation of savage lands by the civilized and intellectual, is the recent discovery of a mode of increasing the quantity of Quinine. Without this powerful febrifuge, Europeans would long ago have been arrested in their attempts to penetrate into the wastes of nature, by the desert luxuriance amid which pestilential fevers are so abundantly generated. Science is the handmaid of true religion, and the zeal of one but animates the other. When human energies are rightly employed, disease will diminish. Ignorance, the nurse of crime, must perish. Natural and revealed truths, being perfectly correspondent, are appointed to restore the golden age, and their apostles are abroad in every quarter of the globe, instructing men, by little and little, to purify the earth, that the air, which should be only the breath of life to all creatures, may no longer convey delirium and death to man. It has been ascertained by experiment that about a 15,000th of sulphuretted hydrogen gas mixed with the atmosphere will kill birds, and produce just those effects on the human constitution which are described in the narrative of an expedition into the interior of Africa by the Niger, by Mr. M. Laird and R. A. B. Oldfield. "The horrid, sickening stench of this miasma must be experienced to be conceived; no description can convey the wretched *sensation* which is felt for some time before and after daybreak. One is oppressed, not only bodily, but *mentally*, with an indescribable feeling of heaviness, languor, nausea, and disgust, which it requires a considerable effort to shake off." There can be no doubt that skillful

draining and proper cultivation would soon exhaust this vast reservoir of pestilence, and open the heart of Africa to the blessings of free commerce.

A degree of the same kind of miasma, is, I believe, not unfrequently felt, during warm weather, in the marshy districts of this country; and I have often heard the fishermen on the southern coast of England talk of "a stinking fog," which occurs there on summer nights. They attribute depression of spirits, and several diseases, to its prevalence. I have myself experienced it, and observed its marked effects, especially on children, in producing fretfulness and feverishness, such as occur when they are deprived of fresh air.

It was observed before, that the hydrogen and its combinations are the chief causes of poisonous deterioration of the air. The prevalence of these gases causes towns to be more frequently visited with low fevers than the country villages; but their effects on the mind, though less appreciable than those on the body, are no doubt very considerable, since it is shown by extensive experience that the air may be rendered highly injurious to the nervous system, without being sensibly impure. The constancy of an evil influence, however feeble, at length prevails; and thus human beings, daily subjected to inconvenience, instead of becoming merely inured, are more apt to become unnatural, in keeping with their position, physical sensitiveness taking the place of moral discrimination, and the holier affections being lost in the confusion of morbid feelings. Hydrogen gas is the most subtile and permeating of aëriform bodies; and it appears, by the analysis of Morcati and others, that it favors the diffusion of morbid poisons, as a menstruum and vehicle, holding in solution both animal and vegetable matters, which, being brought into contact with the blood, at once alter the chemical relations of that vital fluid, and produce a kind of persisting ferment in it.

This gas facilitates decay, and its presence prevents the oxygen from duly acting on the blood, the carbon of which it causes to be very quickly combined with oxygen, so as to form carbonic acid, perhaps even in the blood-vessels. That a small addition of hydrogenated air operates most prejudicially on the functions of life, was demonstrated to a considerable extent during the excavation of the Thames tunnel, many of the men therein employed having suffered from a malady of a remarkable and very obstinate character, in which the blood became vapid and colorless, attended by peculiar debility of the muscular and nervous systems, and thence, of course, connected also with much mental disturbance and imbecility. It generally required some months of exposure to the cause to produce a full development of the disease, and an equally long employment of the best medical appliances to obtain a cure. A fact of this kind throws light on the mental and physical condition of the pallid, haggard, and unhappy crowds which may be met with in all great towns, and unwholesome districts, particularly those employed in crowded or badly ventilated apartments. We are sure to find moral and intellectual obtuseness at its acme where poverty of blood is added to the depravity of ignorance, and the schoolmaster and the Christian minister will do but little toward the amelioration of rude manners and morbid feelings, without first putting their dismal scholars in the way to obtain healthful employment, pure air, and wholesome food.

The influence of air and gentle exercise, in maintaining intellectual vigor, is well exemplified by the wide difference in mental progress and temper between a school managed on physiological principles and one on the old, rough, monotonous plan. An interruption to the tasks by a walk in the garden, or, what is still better, a romp in the playground, while the school-

room is being freely ventilated, seems to have the effect of bringing the sunshine in-doors, for the young aspirants again set smilingly to their work, with all their hearts reinvigorated in a natural manner.

If mental application and bodily restraint be not duly interchanged with complete action of the limbs and lungs, with entire freedom of mind, the body will become enfeebled, distorted, and diseased; and the mind, instead of gaining strength in proportion to the sedulous attempt at education, will also generally grow distorted in all its faculties. Hence the artifices and refinements of ladies' boarding-schools are too commonly successful in producing to the full their natural effects, in crooked spines, depraved stomachs, whimsical nerves, peevish tempers, and indolent minds. Such are the results of the finished education of multitudes, who are destined to be the miserable mothers of a puny and fretful race, or who, too visibly unfit to fulfill the grand purposes of their sex, are doomed to breathe out their weary existence in struggles to suppress the thought of that sphere of usefulness and happiness which their affections and their faculties might, but for the state of their bodies, have so well qualified them to adorn. Wrecks of God's best workmanship! He only can ameliorate your miserable condition, and rectify the ruin into which the huge and hideous follies of artificial and most ungodly training have introduced your lonely spirits. We ought to take every opportunity to protest against the mismanagement which, in spite of popular treatises on physiology and physical education, still prevails in the majority of ladies' schools. Nor is the evil quite unknown among the very precise few who keep select schools for young gentlemen. The good, nervous gentleman, who owns the headship, is, perhaps, a character who loves his books better than the sunshine and the breezes on the hills around the church, and he can not endure

noises: so the boys must be tamed and domesticated, without proper exercise in the air, because the weather is wet, or looks showery, and they can not be allowed a good rough game within doors, because it encourages rude and boorish manners. So "ingenias dedicesse fideliter artes," &c., is often quoted to them—"nec sinit esse feros"—the *mores* are effectually mollified by tasks, tasks, tasks, from dawn to darkness, with prayers for blessings morning and evening; while the chief blessings of fresh air, sunshine, and health are too often neglected, because they are to be had by simply running out for them. Of course, boys thus cultivated are only fit for a hothouse sort of life, or, if they recover a degree of vigor when emancipated from school, their brains having been so misused, and the habits of their minds so unnaturally fixed between heathenisms in sweet metres and Christian words without Christian ways, the vast probability is, that they will seek enjoyment in any but a manly manner: their intellect will be all awry, and, not being able to maintain a commanding position in society, although stored with intelligence, they will apologize freely to their own consciences for indulging in such vices as they happen to fancy; spend their fortunes, if they have any, in association with abandoned misery; and not unfrequently, at length, finding beer, tobacco, and debauchery only aggravate the sensibility of their genius, take to constant dram-drinking, then to opium-eating, and then to suicide.

Against the mighty mischiefs entailed on our daughters by the stiff and starched system of muslin education, is what we should be now most earnest and constant in declaiming; for the evils are almost incalculably great, and will grow with the rapid increase of false refinement, unless firmly, feelingly, affectionately resisted by fathers and mothers who are alive to these enormities. Perhaps, when it is understood that young men have learned to value

young women for their health, the liberty of their ribs, and that freedom of mind which is seldom known without a free use of the limbs, the plan of preparation will improve; and we shall more frequently see accomplished women in the majesty of natural beauty and gracefulness, instead of merely manufactured ladies, the stinted results of the most cruel artifice, which, at the best, makes only pretty dress-dolls, but too often converts what was naturally excellent into bedecked deformities of temper, face, and figure. Dr. Forbes says that he examined forty girls at a boarding-school, and every one of them who had been at school above two years was crooked. Those schools are the best, where science is brought into action; but those are the worst, where the worst affectations of the higher classes are abundantly imitated, without the means or the knowledge necessary for the fulfillment of educational duty and bodily training. These establishments are the nurseries of pale, sickly, listless, peevish girls, who, if their stay be prolonged, are sure to be rendered entirely unfit to become happy wives and healthy mothers. A moderate share of health is a rare thing among women of the leisurely classes of society; and however their natural excellence of disposition, and the peculiar amability of the sex may tend to preserve them from the charge of ill temper, still it is certain that the larger number of them would have been far more nearly perfect in moral and mental dignity, if the unjustifiable restraints of school, stays, and inactivity had not curtailed them of their fair proportions, and, by disturbing the developing processes of bodily life, interrupted the growth or manifestation of the soul into the fullness of its beauty, and left it, a task almost beyond the power of the discommoded mind, to regulate the will by the dictates of knowledge and wisdom, because disordered sensations so habitually distort and confuse the ideas. That this deficiency of bodily power among young ladies

must be attributed chiefly to the want of bodily exercise in the air, may be proved, by comparing the walking power between the young women and the young men of the same family. No doubt the disfiguring habit of compressing the lungs, heart, liver, and stomach, by tight stays, during the period of growth, is another pregnant cause of debility and distortion; but this is the more injurious, because it acts mainly as an impediment to breathing, and to the taking full exercise: the lungs are not allowed completely to expand, the heart is oppressed, the muscles of the chest are atrophied, and the muscles of the rest of the body not being supplied with sufficient rapidity with oxygenated blood, they refuse to obey, the nervous system suffers, the back grows crooked, and the brain irritable. Alas, then, for the temper! It can not be too strongly enforced that endeavors to mold the body into unnatural shape, by hindering the action of any of the muscles, is to produce deformity by the excessive action of other muscles. The powers of the body are antagonistic; the balance is preserved by the operation of opposing forces: and the proper object of education is, therefore, to adjust the equilibrium by the appropriate exercise of each part. And the mind, like the body, can be developed into beauty and strength, by calisthenic exercises of its own. The faculties and affections require employment, according to their states, with a view to the social system, and thus to the well-being of the self-hood of each soul; but, as law demands obedience, and obedience is only visible in action, that teaching is of little avail to the mind, which does not control the body.

CHAPTER XXI.

PREMATURE AND EXCESSIVE EMPLOYMENT.

We will now pass from genteel miseries to those of a more vulgar order. The tyranny of trade compels multitudes to submit to a drudgery of toil scarcely less destructive to mental independence and enlargement than the former slavery of our old colonies. Although commerce is the natural emancipator of the mind, yet, perhaps, by some strange political mismanagement, it has in this country erected a vast impediment to the education and elevation of the minds of the operative classes, by causing a demand for the labor of children, to the exclusion, in a great measure, of grown persons; thus reversing the order of nature by making parents depend on the wages of their little ones. The very idea suggests countless evils of enormous magnitude, to which we can only allude. It is, however, impossible to avoid a brief consideration of the subject, as it affects the mental state of children so employed. Common sense and feeling assure us that the playful activity of the buoyant child ought to be giving merriment to the village-green, or the hum of busy and happy learning to the village school, rather than toiling away its puny strength in gathering wealth for mercenary pride.

The slave that searches for the dust of gold, or delves under the lash to plant for others the sweet cane, has the benefit of pure air and healthy exercise, and of sufficient repose; he grows robust, and the vigor of his body supplies something like enjoyment to his brutish

mind; but those who are too hardly and too early worked attain the furrows of old age ere the first bloom of womanhood or of manly energy appears, and with undeveloped mind, it may be sensible enough to the infectious sympathies of vice, and with bodies, the mere rough sketch of humanity, they often steal through their struggling life without once enjoying a full and proper taste of the genuine happiness of home, with all its kindred sweets of busy intellect and affection. Labor and penury blight and wither both heart and soul. The music and beauty of green valleys and heathery hills are known to such only in the words of melancholy songs, and the inspiring freshness of the summer sky has been felt but just enough to enter into the imagination of a higher and a toilless world. Hope dies not; God is theirs, and He hears their cry. Yet we know the day of rest can scarcely be valued in their weariness of the flesh, but because the harsh voice fails, while yet dark night lies cold upon the world, to rouse the weary sleeper from his bed.

It is not strange that mental and moral as well as physical disease should be frequent inmates of such dwellings. The sweet charities of our better nature, and the higher virtues which religion brings like an angelic train with her from heaven, can scarcely gain admittance among the squalid and absorbing miseries of that terrible penury and bodily exhaustion which man's inhumanity compels thousands of his kindred to endure. By starts the soul awakes, struggling for mastery, but the unnerved body obeys not. The luxury of stupid obliviousness is its only heaven.

When Crabbe, the poet, accompanied by his amiable wife, visited one of the cotton factories, full of engines thundering with resistless power, yet under the apparent management of little children, the sight of the little creatures condemned to such a mode of life in their days

of innocence, quite overcame her feelings, and she burst into tears. Well might her maternal heart be greatly moved, for she felt at a glance the unnatural compulsion and misery that must be at work to convert such a number of hopeful and eager children, souls just fresh from their Maker, panting for love and knowledge, into living appendages of a senseless machinery. But she knew not the long history of wretchedness, bodily and mental, connected with their toil, and, indeed, with almost every department of labor, especially where women and children are employed. Dr. James Phillips Kay, a physician, who practiced in Manchester, uses these words in writing concerning the poor "drudges:" "The employment absorbs their attention; their persevering labor must rival the mathematical precision, the incessant motion, the exhaustless power of the machine. These *patients* lose flesh; their features are sharpened, the skin becomes sallow, or of the yellow hue which is observed in those who have suffered from the influence of tropical climates. The strength fails, the capacities of physical enjoyment are destroyed, and the paroxysms of corporeal suffering are aggravated by deep mental depression."

Mammon calculates the wear and tear of steam engines and spinning jennies rather than of human souls and bodies.

The following occurs in the evidence of William Rastrick, before Mr. Saddler's Committee in 1832: "Was it not found necessary to beat children to keep them up to their employment? Certainly. Did the beating increase toward evening? Their strength relaxes more toward the evening: they get tired, and they twist themselves about on their legs, and stand on the sides of their feet. When you were employed as an overlooker, and had to superintend those children, was not the employer aware that you had to stimulate them to labor by

severity? Certainly he was, and it is always considered indispensable. Would he himself rather urge to that course than to the contrary? His object was, in every case, to get a certain quantity of work done by some means or other, but when it was necessary for the overlooker to use severity, he had to bear the stigma, and not the master. Did you not find it very irksome to your feelings to take those means of urging the children to the work? Extremely so; I have been compelled to urge them on to work when I felt they could not bear it, but I was obliged to make them strain every nerve to do the work, and I can say I have been disgusted with myself and my situation. I felt myself degraded, and reduced to the level of a slave-driver in such cases."

The following is one among many horrific answers given by Samuel Coulson. It is taken from a work entitled—"*Evils of the Factory System demonstrated by Parliamentary Evidence*," *by Charles Wing, Esq.*

"Question. Were the children excessively fatigued by this labor?

"Answer. Many times we have cried when we have given them the little victualing we have to give them. We had to shake them, and they had fallen asleep with the victuals in their mouths many a time."

The giant evil which thus oppressed the weak and defenseless is now, happily, somewhat restrained; the voice of Christian philanthropy is heard, and national and selfish policy yields a little to her demand. Many large manufacturers fear God and regard man; and their efforts, therefore, to ameliorate the condition of their operatives are extensively praiseworthy and blessed. Others, however, who yield nothing of their greediness but to the force of the law, need most jealous watching. Facts demand the improvement and regulation of factories under wise and Christian laws; and that the more because

their existence as a means of industry, under proper management, has been proved replete with blessings both moral and physical, where the domestic relations have not been impaired by the employment thus afforded to the crowded poor. Far be it from Christians to desire the destruction of our manufactural interests: Christianity does not destroy, but regulates industry, and thus increases both its power and its blessings.

Wealth-worship, like all mere idolatry, is ever attended with cruelty, and it still calls for victims; no sacrifice appeases its cravings, and Mammon, when he may, always drive his slaves to death. It matters not what the trade be, if the master is inspired by no better principle than selfishness; his minions must all stoop to that, and accordingly suffer the depressing influence of hopeless toil, which must always result in the aggravation of common depravity. The effects on the body are but a small part of the evil induced by excessive employment; the physical evils are pregnant with moral evils of the most terrible kind. The purposes of mental existence can not be fulfilled, and the nervous distress arising from daily exhaustion constrains the sufferer, in his ignorance, to resort to artificial methods of excitement to obtain something like an occasional sense of animal power. Hence we find gin, opium, and spices in large demand among the operatives of our great manufacturing towns. But these excitements leave the body still more susceptible of exhaustion, and, by arousing the organism of the passions while enfeebling the intellect, they produce intense irritability of temper, to which all persons subject to constant weariness are of course greatly predisposed; hence these poisonous appliances act upon their tired nervous system with resistless force, overpowering every lingering suggestion of conscience, sapping the basis of integrity, dissolving the last relics of manly virtue, imparting scowling cowardice in the place of open courage,

fixing in the very constitution of the physical fabric an almost immovable barrier to all moral improvement or spiritual aspiration, and as effectually serving the purposes of the foul fiend, the tempter, and accuser, as if his demons held complete management and possession both of the body and the soul. The artificial habit is domestic, and infants at the breast are used to drams and opiates. Alas! still too often the baby nestles but little in the mother's bosom. The mother is lost in the starving slave, who toils for life by wearing it away, while her perishing little one slumbers with opium, or appeals, by its wailing, to unnatural charity and to breasts that are sealed. Hence the few children that reach mature age are prepared only for vice and disease, especially as the fatigue and duration of daily labor, which they soon begin, allow them no time for education, but, together with the morbid appetite acquired in the cradle, only demand more stimulus as they advance in life, which must thus be soon worn out.

It will be proper again to observe, that the animadversions on the factory system contained in this chapter are applicable only to certain places, where that system is unmercifully abused. There is abundant evidence to show that many manufactories are most righteously conducted, and therefore with advantages to the operatives, both as regards bodily and mental health, far superior to those which are commonly enjoyed by any other class of laborers. Yet the physical diseases and mental and moral abandonment produced by exhaustion, are certainly always most numerously exemplified in large manufacturing towns, and therefore the evil can not be too strongly urged upon the public mind, in order that all classes may see the necessity of a remedy, and unite in endeavors to obtain it.

There are those who have it in their power to contribute in many ways toward the amelioration of our

laboring population, who, nevertheless, put not forth a finger to the burden, but rather continue to add oppression to oppression for their own convenience, and,

> "With necessity, the tyrant's plea,
> Excuse their devilish deeds."

With such individuals, whoever they are, and however numerous or threatening, Christianity allows no compromise, no truce, no parley.

We will now proceed to another department of drudgery not so often thought of. Many shopmen and apprentices are confined behind the counter fourteen or fifteen hours a-day, in impure air and ceaseless worry. Night arrives, but they toil on till ten or eleven, with flushed cheek, and fevered pulse, and heavy brow. Sleep and work are their only lawful engagements, if we may judge from the requirements of the comfortable master, who at an early hour retires from care and business to the enjoyment of the country, or the social blessings of the parlor or the drawing-room. And is it then surprising that consumption, decay, and death should be more busy among the denizens of towns than of rural hamlets?

> "With the year
> Seasons return: but not to them returns
> The sight of vernal bloom or summer's rose,
> Or flocks or herds.—But clouds instead."

Is it then a wonder that so many of such should wither in soul as they droop in body, and yield their spirits to the seduction of any debauchery which may serve occasionally to diversify the stale monotony of their doom? Life should be a power of enjoying the body and soul in pursuits congenial to the faculties of both. Those who wear out their clerks and apprentices with constant devotion to Mammon are answerable for a great deal of licentiousness and Sabbath-breaking. But the case is worse with the meeker and more gentle part of our spe-

cies, whose training and nature fit them for the more sedentary occupations. It is fearful to reflect on the miseries of mind and body entailed on the many thousands of young females who obtain their meager pittance of a livelihood by needle-work. The struggle to endure the artificial destroys the natural. A morbid aggravation of their peculiar infirmities soon brings them under bondage to all those sensations known as dyspeptic and hysterical symptoms. The fine feelings on which the excellence of female character is formed, and those affections which require only the encouragement of time and opportunity to make a home blessed and sacred, are all blighted. Natural affections dare not expand: there is no room for them in the crowded and unnatural establishment; they can not grow pent up in an atmosphere redolent of fashion. What will not pay can never be permitted: so there is no exercise possible but of the eyes and fingers, and the aching nerves, which are every day weary, even to agony, with looking at and handling silks and cottons and artificial flowers. Thus the intellect and the heart become alike beclouded; but the sensibilities which pertain to the cardinal vices are the last to die, they are even strengthened by atrophy of soul; and as that enjoyment which flows from the feeling of vital vigor is sealed up at the fountain, the mind seeks for zests in keeping with its degraded condition. Hence the corroding cordial of gin is no secret in dress-making establishments; but yet their inmates do not rapidly fall into perdition, since they are long shielded by an instinctive dread of all that disgusts hopeful humanity. Some there are among them who, perhaps, scarcely come into the category of responsible agents, for they have from the cradle been familiarized with vice in its worst forms, and although they may have been taught to disguise their nature and their habits by an exterior decency, still the poisonous contagion oozes from them,

and others are contaminated. Thus, from their bodily and mental inactivity, and from their increased susceptibility, and their gradual association with the impurity about them, multitudes of young women, being robbed of the power of employing their bodies happily, that is, with natural hopefulness, become more easily deluded by any wretch who may promise to love them, for disappointed nature is apt to become desperate. But there is still a lower grade of needle-women who obtain "an abidence," as they aptly term it, or starved subsistence, by making shirts at five farthings a-piece! These

> "Work—work—work,
> From weary chime to chime;
> Work—work—work,
> As prisoners work for crime."

It is true that a solacing thought may spring up, like starlight in the darkness of such an existence; but this world must still be bitter, cold, and hard to the weary and heavy-laden lonely woman; and even if some word has been dropped by the Savior to soothe the soul of such a one, with hope of coming rest and gladness, yet she must feel that Christians are too scarce, or she would not be left thus alone in her faith to struggle with desolation and weakness.

When we consider that the exercise of volition always tends to exhaust the brain, and disqualify the mind for thinking or attending, we shall not be surprised to find that excessive bodily action not only degrades man as an intellectual, but also as a moral agent. The will and the understanding are alike distracted, and as the one is essential to the proper use of the other, both equally betray a tendency to perversion. Although, indeed, it requires no refinement of intelligence, no learned leisure to perceive our duty both toward God and toward man, yet its due fulfillment demands an habitual effort of soul which constant labor of muscle perhaps entirely pre-

cludes. He whose whole existence is seemingly valued by society only in proportion to the amount in which he can exercise his brutal strength for the accomplishment of a certain quantity of dead work, is not likely to be influenced by the dictates of a fine conscience. His position and his treatment teach him nothing of his relation to immortal spirits. His affections are scarcely allowed to be expanded beyond himself. The indulgence of his body must be almost his sole delight. To eat is essential, to sleep necessary, because he can not work without strength; but to reflect on the works of God, to associate, through books or the sympathies with living souls conversant with their Maker,—that is foreign to his station. Knowledge and slavery do not agree, and therefore those who prefer enslaving their brethren, that they may delve in the mine without a right to the metal thence extracted, advocate ignorance, lest the inspired word, exhorting all men to be free, should awaken the enchained. In this country, however, that blessed word is felt stirring through the mass of society like a life, and therefore toil is not enforced directly with the lash, but by the keener persuasions of hunger. Religion is made to bear upon the bodily workers, but in too many cases as if only to show that it is a duty to labor incessantly, because the Scripture says that he who will not work, neither should he eat. Hunger is a strong stimulant, but conscience is stronger, and no doubt many toil all day, and suddenly fall asleep at night with resignation to God on their lips and in their hearts; yet, under such circumstances, however warmly their affections may cause them to cling together in family clusters, there can be but little room and opportunity for the improvement of habits either of action, thought, or feeling; and their ideas must be almost as few as their pleasures. A sort of mechanical morality is thus apt to be substituted for that happy alacrity of obedience which springs from

reason's quiet intimacy with spiritual truths. Such morality is like mill-work, which goes on steadily, because formed to work when set in motion. Man, however, has a soul; and *it* requires exercise as well as his muscles; but without leisure for thought, and for the use of brain and nerves, for other purposes than those of toil, toil, toil, he grows wild at heart, like a savage driven, by his inhuman position, to grub roots for his life all day long. Exhaustion is a perfect sedative, and wisely is it so ordered by our Maker; for our wills, as regards the body, had better be suspended when the body is unfit for exercise. When there is no enjoyment in thinking, there is no motive for thought; and therefore we may be sure to find ignorance, vice, and misery connected with excess of labor, whether in town or in country, because sufficient food is not more needful than sufficient rest for the maintenance of good feeling. As a starved body can not be called into exercise without madness, so neither can a starved soul; and it requires something more than philosophy to enable a man contentedly to suffer any want. The practical end of the matter is this . we should show charity and forbearance toward each other up to the full extent of the Christian law, if we would improve others or enjoy ourselves. Every one, moreover, who loves life truly, and wishes to keep his soul fresh and fair for departure, should maintain an intimacy between his heart and all nature, and by all means avoid excessive labor, monotony, and fixedness. Let him dwell among the hills, with trees, and flowers, and streams, and singing birds, that if dark thoughts come over him in the twilight, he may quietly turn to the stars and to his Bible. Should any trouble disturb the heavenward will, go forth into the freedom of light and air, and feel the Infinite about you, my reader! Or if disease or decrepitude, or painful necessity of any kind afflict you, at least, get the freshest thoughts you can from the minds of those who

describe what they feel in natural imagery, so that your soul may be with them, as if abroad in the wide world of sights and sounds; above all, keep your mind busy with the realities of good to come. Whatever vexations rack your heart, go out mentally, and bodily, too, if possible. But do not fancy that sauntering in the sunshine alone is not solitude. If you are peculiarly burdened with care, you will need a companion in your walks, and the best you can have *then* is a young child, for from such a one you may learn how you ought to live—namely, by faith, and thus enjoy the goodness of God to the utmost, by casting all your cares upon the Parent. In short, always take with you some object of love, or look for one. Be free. Those whom Providence or Mammon has shut up in smoky towns ought to seize all proper opportunities to reach the region of green fields, or otherwise they will surely degenerate into gossipers. The spirit of a man loses nothing by a wise use of holy-days, and business gains much from the greater aptitude of a refreshed soul. To restore the affections and faculties to a healthy state is the end of religion, and every kind of exercise that will conduce to this consummation 's, therefore, a religious duty

CHAPTER XXII.

SLEEP, DISEASE, DEATH.—CONCLUSION.

As both the intellect and the will are called into exercise by our affections, so mental energy grows amid difficulties, and our moral being is trained to perfection by many trials. But yet the present constitution of man demands rest as well as action, and, therefore, whenever exertion has impaired the organic functions of life, or the nervous system is exhausted, a tendency to sleep occurs. In a country where the days and nights are pretty equally divided, the alternations of activity and repose partake of the regular return of daylight and of darkness, because the excitability of the organism for the most part requires daily restoration; but in countries, such as Lapland, where days and nights are prolonged into months, the inhabitants seek repose according to the degree of their labor, or the demands made by their minds on the energies of their bodies. Sleep, then, does not depend on the recurrence of night, but on some internal cause, as, indeed, is demonstrated by facts presented in several preceding chapters. Czermack, Berthold, and others, have, however, proved, that periodic rest is necessary for the reproduction of that power in the nerves by which the will is enabled to act on the muscles; and hence we learn that a due proportion of repose is essential to the proper manifestation of mind, in the orderly use of the body. But this is more especially and evidently the case in children; for as

growth and invigoration are mainly promoted during sleep, of course, if they be not allowed a sufficiency of it, they are sure to become both mentally and physically feeble and dwarfish, memory and volition becoming alike confused by bodily inaptitude and debility. The experience of every one who is in the habit of thinking must have taught him, that the mind acts with most deliberate power in the morning, and also that the thoughts become associated with ideas of exertion whenever the body is refreshed; so that we feel that the time for planning is after the body has been duly rested, and before it is again called into exercise. The memory is clearer in the morning, or at least soon after awaking from healthy sleep, because the thinking power is then free from those impressions which crowd on the senses during the activity of the day; for new thoughts arise, together with remembered ideas, in the renewal of nervous power, and the associations of the past are more perfectly perceived and interpreted by the understanding; while the senses, being refreshed, but not strongly excited, our self-consciousness is at the highest, so that our affections, whether good or bad, joyous or grievous, hopeful or despondent, are then most potently experienced. The vivacity of thought and expression is, however, most remarkable in the excitement of society, because our intellects are called into play by our sympathies; hence the evening is the favorable time for wit, the flashes of which often partake somewhat of the nature of delirium, in consequence of the readiness with which the mind yields to suggestive impressions, since imagination is of course most active when the body is so far wearied as to render entire rest of the muscles agreeable, while the brain is yet not so far fatigued as to require sleep, and while the mind is still faintly busy with some present object of affection. The dimness of evening is also favorable to meditation, because much

light stimulates the optic nerve to a degree that distracts the attention from remembered ideas, and impresses realities too forcibly to permit imagination free exercise.

The soul, if sensible of its capacity and worth, looks into its own history, when not engaged in using the senses on outward objects; hence the man of genius withdraws himself from things for the sake of thoughts, and catches the images of creation, to arrange them in new order in his mind, according to the habit of his desires. Thus the poet most glowingly conceives his ideas, and composes his stanzas with greatest facility, when the heavens are calm and the vesper-star is seen above the clouds, and "all the landscape glimmers on the sight;" but in the morning which is the historic time, he sees that the winged words and burning thoughts which carried his soul captive need the corrections of sober memory and the schoolmaster, almost as much as the wild reasoning of an ordinary dream would need the severer logic of wakeful experience to reduce it to consistency.

When considering the necessity of sleep and bodily repose to the vigorous employment of the mind, we are apt to draw a conclusion somewhat unfavorable to our estimate of the spiritual powers of man; but this arises from our not duly weighing the evidence before us, or from our overlooking the fact that we learn more concerning the faculties of the soul from sleep than we could do without it. Did you ever reflect on the remarkable circumstance, that the wish to accomplish any thing in a dream is immediately followed by the impression that the thing desired is actually done? The soul takes her wishes for granted, and the train of her thoughts is directed to event after event, one springing out of the other, like the figures of kaleidoscope, in an infinite series, or at least interminable in their variety and continuance, except by the exchange of waking ideas for

dreaming fancies. The deed and the desire are one to the spirit, because the will and the understanding work together, and whatever impediment may be imagined, its removal may also be imagined, and therefore in our dreams our affections are exercised in all their license. Now, from this circumstance we see at once that there is something willing and working according to its own nature, and not according to any material laws; for material laws did not create, nor can they maintain, will, desire, imagination, memory, love, fear, nor any other mental state or feeling. Objects are not affections, nor things ideas, but every being that can perceive objects has ideas and affections, because it perceives and feels other existences in relation to itself. We think and dream according to our experience in combining ideas, and the dispositions that are proper to us as individuals determine the nature of our imagined visions.

Every one who understands any thing of physiology is fully aware that the ultimate seat of sensation, physically speaking, is the brain. If those portions of it which correspond with the senses are destroyed, the power of exciting sensation is as completely obliterated as if the senses themselves were quite annihilated. We find, then, that the mind, by attending and becoming impressed by certain changes in the brain, obtains the perception of different objects, and on these objects the mind reasons, not only according to what it at the time perceives, but also what it remembers. Now, since sensation is begotten in the mind by certain states of the brain, and the direction of thought is according to the nature of the sensation, together with the previous knowledge belonging to the individual, it follows that dreams, in as far as they are excited by sensation, must be produced by such actions in the brain as resemble those which excite sensation. But as our inferences from sensation are modified by our experience, and the

train of our thoughts, set in motion by sensation, proceeds according to the habit of our reasoning faculty, so dreams will be more or less rational according to the vividness with which the mind acts, and has been accustomed to reason. The sensations which excite dreaming arise from peculiar states of brain then present, but the order and nature of the dreams themselves must depend on the past. Doubtless, the dreams of vigorous minds are always more complete than they afterward seem; for what we distinctly remember on waking, is but a small part of what has passed before the mind in dreaming. To hunt for forgotten dreams is proverbially a useless task. If we would test these facts, we may whisper in the ear of a dreamer, and we shall find that ideas will be suggested according to our pleasure; but yet, perhaps, not one of them will be recalled when he awakes.

Physiology can no more account for dreams than it can for thoughts. Why do we reason? Why do we connect the past with the present? Why do we hope? Why do we fear? Surely not merely because we have senses, but because it is our nature to seek enjoyment, according to our knowledge and convictions, which, of course, only signifies that we are beings capable of knowledge and conviction, of which, however, physiologists have not yet proved the body to be susceptible, and therefore they ought to acknowledge an immaterial thinking being. A few words more on what happens in dreaming will illustrate this observation. It is the property of the thinking being always to endeavor to associate present objects with those previously known, as if to classify new phenomena, and in a degree, to explain them by comparison with previous information. Philosophy itself is only a better kind of superstition, endeavoring to explain mysteries according to preconceived notions; just as in our dreams we unriddle one

truth, or one absurdity, by supposing another. While dreaming, we account for any new thing with such amazing complacency, that the strangest combinations of objects scarcely surprise us. In short, we form our dreams by referring every idea that occurs to some class of thoughts which had before passed through our minds. Thus, a person having fallen asleep with his face toward a narrow stream of light, immediately began to dream that a column of darkness had grown up before him. The idea of this darkness would, we know, be excited by the eye having been directed to the light. Speedily this black column seemed rapidly whirling along over a wide plain. This idea of motion was probably excited by the movement of the eye, but it was no sooner perceived or imagined, than the mind began to explain it, by associating it with what had been heard concerning columns of sand carried before the whirlwinds. Immediately he seemed to be in a burning desert of Africa, with the red sun on the verge of the horizon, while the vast column of sand was hurrying to overwhelm him; but in a moment some miracle saved him, and he awoke. Now it is very evident that physical phenomena produced the sensations which excited the mind; but the mind itself made the dream, partly of memory and partly of sensation. Then, again, the manner in which the mind goes back to the past for its ideas in dreaming, suggests the profundity of mystery which belongs to the subject, and at the same time, informs us that the operations of the mind are not to be explained by the anatomist. Why did Huber, after forty years of total blindness, dream of the sights familiar to his childhood? If dreams result from reflex action of the brain, and the images conveyed through the senses are reproduced only because the nerves physically retain their impressions, then have we the vast marvel of material substances preserving in themselves ten thousand

thousand pictures of the past, all mixed together, and yet not confounded; each dependent on a particular state of the nervous fibrils, and yet all the particular states existing at once in a latent state, and every image of the countless multitude fixed in the nerve-matter, capable of being spontaneously represented and recognized by that matter. How much more reasonably are the facts reconciled with each other, by concluding that it is the individual soul that is the subject of experience, and that memory, will, and understanding belong not to the corporeal medium, but to the being that reasons, and that therefore it can not be the brain that dreams, but the soul which uses it. The whole subject is inexplicable, and all experience utterly conflicting, if there be not some individual being subject to all the variety of perception and emotion induced by its connection with matter liable to variations of condition, which may remind it of preceding impressions, and call upon it to exercise its inherent power of comparison and association. Dreaming and delirium are but memory modified by the state of the will in relation to the body. Hence, aged persons are apt, in their mental absence, whether asleep or awake, to behold the scenes familiar to their youth, and in imagination, so to associate with the dead, as sometimes not to be able to distinguish them from the living. It is no uncommon thing for such persons to sleep soundly, and yet say they have not slept at all; and that merely because their dreams are so vivid and distinct that they confound them with realities; and in that kind of delirium frequently experienced in the feebleness of old age, the features, the dress, the language of friends, are exactly recalled, after scores of years passed apparently in entire forgetfulness of them. We know that some physiologists will tell us that the internal apparatus of vision—the brain alone—is essential to the productions of phantasms. But we answer, that a

remembered thing is not a mere *phantasm*, but a *fact*, belonging to individual experience, which the working of the brain *alone* could no more recall, than it could at first have produced. As the soul saw the object at first, so the soul beholds the remembered image or idea. Memory and imagination are but the operations of the thinking being, under the impression of circumstances; and the soul forms objects to itself out of sensations, according to the degree of intelligence and state of the will. But we may now pass on with advantage from these considerations, briefly to reflect on the influence of disease on mental manifestation.

How does physical disorder operate on thought? Does it alter the quality of that which thinks? No. The body is only more or less manageable by the soul. Fatigue is a felt necessity for rest, in order to prepare the body for the use of the soul. This state may be illustrated by what happens in disease. In maladies affecting common memory, the power of attending is impaired, for, in order to attend, certain organs must be put into a certain state—that is, the senses and the brain must be influenced by the mind in a manner which the disease prevents. Mind acts not outwardly, nor associates past impressions with those present, except under this bodily preparation; and when disease thus interferes, the thinking being is rendered incapable of perfect organic recollection, because the will brings not the organization into orderly association with surrounding objects. This is just what happens whenever the brain is wearied or weakened. We feel not so much a pain as an impediment; in short, a kind of warning that we should not use the brain, because it is unfit for our purpose, and requires rest. To disregard this warning is to expose ourselves to the danger of so impairing the nervous system by voluntary abuse as to render it permanently unfit for its intended purpose. The experi-

ments of M. Flourens will, perhaps, illustrate this subject. We will briefly instance one out of a multitude. This shrewd physiologist removed the entire brain of a chicken, which reduced the creature to a state somewhat similar to what pathologists recognize as catalepsy. It was plunged into a deep sleep, from which it could not be roused except by violent irritation. Of course it could not use those senses the central nerves of which had been destroyed by the cruel operation; but it shook its head, ruffled its feathers, dressed them with its bill, and occasionally changed legs, as is common with birds. In fact, it still exercised will, as far as its nervous system remained capable of being impressed. It gradually lost the means of manifesting its instincts as the experimenter proceeded, slice after slice, to remove its brain; but when all the brain was gone, something still remained capable of being roused when the body received a shock, which seems to prove that what perceives is not limited to the brain.

The most perfect impediment to the use of the body, short of death, is that of apoplectic sleep; but even in it we have reason to believe that the mind is often busy in dreaming. Some patients who appear perfectly apoplectic have remembered their dreams; and I have heard an individual, during a severe fit, continue to mutter earnestly about circumstances in which he had been previously interested, and of which, on recovery, he had no recollection. Of course, it can not be proved that the mind is active during what presents itself to our observation as perfect unconsciousness, yet, when all connection with the external world seems suspended, as by pressure of the brain, it is sometimes possible, by shouting in the ear, to rouse the patient to give a distinct reply. In short, we possess proof that a perceiving power continues in possession of the body as long as its organs are in a state to put it in relation to things around it.

To the question, Why are we subject to unconsciousness? we may therefore safely reply, that it is the merciful interposition of Omnipotence, for the protection of his intelligent creatures from the terrors of the transition from one state to another. Thus death, the penalty of guilt, is seen only by fear; and these are all destroyed by reliance on the faithfulness of our Creator.

Apparent death is not always accompanied by a suspension of consciousness, for in some cases the mental faculties have been engaged in an exalted manner, a singular and well authenticated instance of which is related in the Psychological Magazine (vol. v. part 3). A young lady, after lying ill some time, to all appearance died. She was laid in her coffin, and the day of the funeral was fixed. When the lid of the coffin was about to be nailed down, a perspiration was observed on the body; life soon after appeared; at length she opened her eyes and uttered a most pitiable shriek. "She said it seemed to her, as if in a dream, that she was really dead; yet she was perfectly conscious of all that happened around her in this dreadful state. She distinctly heard her friends speaking, and lamenting her death, at the side of her coffin. She felt them pull on the dead-clothes, and lay her in it. This feeling produced a mental anxiety which was indescribable; she tried to cry, but her soul was without power, and could not act on her body. She had the contradictory feeling as if she were in her body, and yet not in it, at one and the same time. It was equally impossible for her to stretch out her arm, or to open her eyes, or to cry, although she continually endeavored to do so. The internal anguish of her mind was, however, at its utmost height, when the funeral hymns began to be sung, and when the lid of the coffin was about to be nailed on. The thought that she was to be buried alive was the one that gave ac-

tivity to her soul, and caused it to operate on her corporeal frame."

It has been asserted by several very honest, but, probably, incompetent persons, that they have experienced a consciousness of being out of the body. The cases of Cardan and Von Helmont have been already mentioned; but perhaps the clearest and most positive testimony to the fact, is that given by Dr. Adam Clarke, the learned Wesleyan, who, when relating his recovery from drowning, stated to Dr. Lettsom, that during the period of his apparent unconsciousness, he felt a new kind of life. These are his words:—"All my views and ideas seemed instantly and entirely changed, and I had sensations of the most perfect felicity that it is possible, independently of rapture, for the human mind to feel. I had no pain from the moment I was submerged; a kind of green color became visible to me; a multitude of objects were seen, not one of which, however, bore the least analogy to any thing I had ever beheld before." When preaching in aid of the Humane Society, at the City-road Chapel, in London, he said, "I was submerged a sufficiently long time, according to my apprehensions, and the knowledge I now have of physiology, for me to have been so completely dead as never more to exist in this world, had it not been for that Providence which, as it were, once more breathed into me the breath of this life." Mr. Green, in his Diary, mentions a person who had been hung, and cut down on a reprieve, who, being asked what were his sensations, stated, that the preparations were dreadful beyond expression, but that on being dropped he instantly found himself amid fields and rivers of blood, which gradually acquired a greenish tinge. Imagining that if he could reach a certain spot he should be easy, he seemed to himself to struggle forcibly to attain it, and then he felt no more. Here we find a green color again mentioned

as the last impression on the mind, which perhaps may be explained on the principle mentioned in the chapter on light. The first effect of strangulation is a retardation of blood, which causes a red color to appear before the eye; but green always succeeds to red, unless the eye be directed to some other color. It is interesting to observe how, in the midst of the most violent struggle to which a human being can be subjected, the soul dissociates itself from the past and the present, and interprets impression in keeping with its desire, which seems ever to be capable of conferring a new world of thought according to its kind. How important, then, that the soul should be familiar with good wishes! These and similar cases prove at least that consciousness is modified by the state of the mind in relation to the body, and that mental enjoyment depends not altogether on mere sensation, but rather on the manner in which the attention is engaged with ideas. In order to bring together testimony to the same effect from opposite quarters, a remarkable vision related by Plutarch may be referred to as an illustration of the notions entertained by the ancient Greeks concerning a future state. The substance of Plutarch's story is this:—Thespesios, of Soli, fell violently on his neck, and was supposed to be dead. Three days after, however, when about to be interred, he recovered. From this time a wonderful change was manifest in his conduct; for he had been licentious and prodigal, but ever after was devout, noble, and conscientious. On his friends inquiring the cause of this strange conversion, he stated that during his apparent death his rational soul had experienced marvelous vicissitudes; his whole being seemed, at first, on a sudden, to breathe and to look about it on every side, as if the soul had been all eye, while at the same time he felt as if gliding gently along, borne upon a stream of light. Then he seemed to meet a spiritual person of

unutterable loveliness, who conducted him to various parts of the unseen world, and explained to him the mysteries of divine government, and showed him the manner in which wickedness meets its reward. This vision exerted all the influence of truth upon his mind, and entirely altered his character and conduct.

We often witness an ecstatic state of mind favored by the condition of the brain. When a peculiar fervor takes the place of orderly activity, and a person's manner is suddenly altered from his natural habit to the assumption of a style of speaking and acting out of keeping with his intelligence and vocation, it will generally be found that some disease of the brain is going on. A man predisposed to insanity is in great danger of losing self-control by allowing his mind to be ardently, or rather inordinately, engaged on any subject; but, of course, in proportion to his estimate of the importance of the subject will be its influence on his heart, and therefore it happens that some sort of religious impression is so frequently mixed up with the reveries of madness. We find that certain diseased states of the brain prevent the mind from acting outwardly without inconvenience, pain, or impediment, and therefore individuals in such states have an air of mystery and abstraction about them which indicates the necessity of their being carefully treated, lest their minds become fixed in a morbid bias. The state of the brain, however, does not determine the order or class of thoughts which may arise during the morbid condition of mind. The habitual character of our sentiments may be modified by the disease, but they are never completely changed except through the influence of other minds upon our own. Thus the man who has never entertained religious feeling during health, will not exhibit any truly pious affection when suffering from disease of the brain, whatever be the part of it affected; but he whose familiar thoughts have been

devotional, and whose social habits have been really Christian, will retain his character in the midst of madness and battle with his impulses as temptations of the evil one, and perceive in all his visions something relating to the experience of his inner life. But, of course, the excess of bodily disease may so disorder his associations as to leave him to the influence of mere instincts; and the best of men, being exposed to disease of the brain, can not be preserved from the causes of a total insanity but by the direct exercise of divine interposition. A case occurs to my remembrance which may serve as a warning to those who prefer religious ecstasy to the quiet activity of a soul duly engaged in social duties. A lady who had long exhibited an extraordinary beauty of character was by association drawn into the vortex of questionable theology, and instead of rejoicing in her habits and opportunities of usefulness, allowed her mind to revel in abstractions. In this state, her enthusiastic friends were quite overcome with amazement and delight: her thoughts were so elevated, her language so sublime, her appearance so heavenly. Her habit of life was completely altered, but still not really improved; she was more retiring, more absent, more strange, and even in person more beautiful; in short, her countenance was radiant with pure and unspeakable joy, such as the blessed Virgin's might have been when she pondered on the angel's greeting, and pressed her holy child with calm and mysterious rapture to her bosom. But it did not last long on earth: her brain was diseased, and she died suddenly while at prayer.

In proportion as any mind obtains intelligence, it discovers that moral beings are governed on moral principles, and must therefore suffer from perversion of will. Confusion as well as wonder is the offspring of ignorance, and sin is willfulness opposed to law. It scarcely becomes us to say to the Almighty—Why hast Thou

permitted this opposition? We contemplate the influences operating on human thought and action under too limited a knowledge to be able to apprehend how there can be a regulating power where there appears to be so much disorder; yet perturbation, not less than its correction, is the result of law. Though evil is the opposite of good, and therefore the antagonist of God, yet omnipotence is revealed in its permission, because it is restrained to the furtherance of benevolent purposes by calling forth the virtue of loving spirits, and by demanding the highest exercise of their faith. To believe in Him who is the reconciler of all things to Himself is to believe in the ultimate vindication of all His attributes, and to feel that the stability of His throne is as sure as eternity. The love that originated all creatures has never allowed His own nature to be involved in the contradiction of their necessarily narrowed understandings, and when their round of error is completed according to *their* little wills, it shall still be found that *His* will triumphs, and the boundless universe must everlastingly declare in every color of the threefold light, and in the lines of darkness that divide its rays, in spite of sin, in spite of suffering, in spite of death, that God is love, the Source of endless life. These thoughts naturally spring up in the heart of a Christian when he reviews the moral history of this world; for he sees that, whether he regard it in individuals or in communities, the failure of man is all along conspicuous, while the finger of the Almighty is equally evident. Probably in no respect is the truth of this observation more manifest than in the contemplation of the numerous epidemic diseases which have in most mysterious succession afflicted the nations. These have been so visibly the result of direct interference with the common course of things as to leave us no means of accounting for them but by reference to immediate divine appointment; and this we do the

more readily, because the moral and physical habits of mankind, at the time of their occurrence, have not only appeared to require the introduction of some evil which should shake society to its foundations, but also because we find the morals, manners, and customs of nations wonderfully modified by such incursions. Society takes a higher standing after being decimated by pestilence: mind is quickened, the battle between good and evil is more fiercely determinate, and, as in the contest good must always triumph, so, the stronger and more general the struggle, the more blessed the advantage. This remark holds true, perhaps, only where the human heart and intellect, understanding and will, are, in some measure, enlightened and rectified by revealed knowledge: where the darkness is entire, epidemic disease generally continues until the inhabitants are swept away to make room for higher orders of people, or until new light arises upon them. Those who wish to obtain demonstration that the extensive prevalence of fatal disease is a means in the hand of Providence for the mental development of the human race, would do well to study the beautiful treatises of Hecker on the epidemics of the middle ages. We might advantageously refer to the moral effects of the "Black-Death," and other fearful pestilences, in proof that they were such as might have been expected among a people so grossly ignorant, and to show that there can be no security for the improvement of our moral nature without true religion, that is, without an intimate acquaintance with the laws of God, both in regard to the body and the mind.

But it will be far more pleasing to contemplate the moral effects of disease, in individual cases, of which we have a number almost always before us. The sum of all our experience on the subject, however, is to convince us that the mental energies of man are roused by suffering and disappointment to greater development,

to a fuller realization of his connection with a future life, and that the direction of the affections will depend on the previous training of the soul, and the state of the will induced by religious belief. In short, a man's faith is at all times his life, and according to his principles will be his behavior. The tone of his thought will accord with his affections, and the union of the corporeal with the spiritual, while enforcing a peculiarity of manifestation, proves, at the same time, the existence of an innate vital personality which death can not touch. To study feebleness is to study power, for there is a might that lives in weakness, of which those who are struggling to predominate know nothing.

Though our moral nature possesses no restorative principle in itself, yet the delicate susceptibilities which distinguished the earlier periods of our experience plainly indicate our original fitness for higher ends than the scenes of this world afford us. The better feelings of childhood and youth lose their bloom and loveliness by the necessary associations of maturer years. Earth is not a fit place to train us in perfect keeping with our capability of enjoyment. The functional and criminal are too nearly connected, in consequence of hereditary corruption. We feel, as we advance in life, that neither our positions nor our pursuits are quite compatible with freedom of spirit, since we are obliged to calculate on consequences, instead of obeying impulses, simply because we are not pure. Who desires not to regain the acute and delightful sensibilities of opening existence, when the passions, harmonizing together, awoke responsively to every touch of tenderness and love? The past, however, returns not with a wish, but yet all that was good in it *shall* return, to be lost no more. The finer spirits (to use a figure) have indeed evaporated in the more heated atmosphere of manhood; nevertheless, there is probably in the heart of every human being a

portion of created excellence, which can never wholly waste away; there is always some germinal atom, some pure element, some light within us, some drop of holy life imparted by the touch of Jehovah, which has a natural affinity for all that is lovely and truthful, both as regards affection and intellect, which in a proper atmosphere, would expand into glory, by commerce with the skies. But the selfishness which, like a petrifaction, or rather iciness, hardens about our hearts while engaged in worldly pursuits, can not be broken or melted off but by some violence to our habits. It is necessary for us to be brought into the helplessness of childhood, to feel again a child-like spirit. The spring of health which, bounding from our eager bosoms, sustained our more selfish passions in their vigor, must be diminished in its gushings; disease must reduce us to extremity of weakness ere the acquired willfulness of our wayward souls quite yields attention to the still small voice that whispers the remembrance of a mother's loving care, or a father's earnest prayers, and thus brings back upon our memories the thousand lovely visions that haunted the heart of our childhood. It is in this way, if ever we get a retrospective glance at the love of Him that originated our being, and again invites us to his bosom, saying, *Suffer little children to come unto me.* The vivid impressions of early fancy, so near akin to piety, thus mingle at last with the stern knowledge which schooled our tardy reason, and under the guidance of that spirit which points the way of life in truth and charity, we are conducted to the blessedness of an eternal home, and a kindred that neither weep nor die. Happy he who learns, from his own history, how frail he is; and, being persuaded by the vanity of his past desires, resigns his will and his understanding to the gentle teaching of Omnipotence, still ready to support and to comfort him with more than the tenderness with which an

affectionate mother aids and soothes her own weak child. Death-beds afford many most beautiful lessons, which the wisest among us would do well to learn by heart.

Although it is a fact that the extreme debility preceding death generally brings with it a meek quiescence of the will, because nervous irritability is then exhausted, the mind, nevertheless, in most cases, continues perfectly active and collected, within a very brief period before departure. A marvelous serenity and clearness of perception are not unfrequently evinced. The soul seems to estimate truths at their proper value, by beholding them in a light that takes no color from earth; for when a man is conscious that the hand which brought him into this life, naked and helpless, has possession of his spirit to convey it, unclothed, into another mansion, the desires appropriate to this lower world are dismissed in the urgency of the grand occasion, and he longs only to resign himself with becoming composure to the will, and the might, and the tenderness of Him who can not forsake his creatures. It is then that God appears worthy to be trusted, for then all other being fails; but the unsearchable wisdom of His providence is only the better manifested to man by man's thus standing alone with his Maker. We then feel that, as none but the Greatest, the Supreme, could have called us into existence, none but He could so perfectly prepare for our exigencies, and meet our wants; so none but He can confer the hope, and provide the means, of eternal life. Such assurances, however, spring not up of their own accord, in the darkness of the uninstructed mind. The confidence of the departing spirit is but the maturity of the faith, whatever it may have been, which governed conduct during the activities of a man's intercourse with his fellows. Yet we must not overlook the vastly interesting fact, that in all the numerous tribes of mankind, however ignorant, however degraded, there is

scarcely a human being to be found who does not inherit the belief, that to die is only to change one abode or one mode of existence for another. There is a reliance on the Creator in this faith. Thus the Author of life has everywhere softened the bitterness of death, by committing to every rational soul a claim upon Himself for accommodation and enjoyment according to the condition of its desire and of its knowledge forever.

Schiller, when dying, was asked how he felt. "Calmer and calmer," he replied. Perhaps this serenity was mainly due to the state of his body; for that degree of physical weakness which no longer suffers the will to employ the muscles, but yet arrests not the internal action of the brain, is usually attended by an indescribable calm of mind. If, indeed, the conscience be reconciled to God, it is complete; for then the torment of conflicting affections is over, and the soul sees only that it is heir to a rich and eternal inheritance. Thus a tranquil ecstasy is often witnessed at the death-bed of the Christian.

> Is that a death-bed where the Christian lies?
> Yes, but not his; 'tis Death itself there dies.
>
> COLERIDGE.

Of course the subjects which the Christian's mind has been accustomed to contemplate will recur during the quietism of exhaustion, when the soul almost forsakes the senses, and then the dying man may mutter the unconnected sentences of a happy delirium; but yet we dare not say that all his raptures are merely delirious. When the vital flame flickered, almost extinguished, the heart faltering with every pulse, and every breath a convulsion, I have said to a dying believer, who had not long before been talking in broken words of undying love, "Are you in pain?" and the reply, with apparently the last breath was, "It is delightful!" In another person, in whom a gradual disease had so nearly

exhausted the physical powers that the darkness of death had already produced blindness, the sense of God's love was so overpowering, that every expression for many hours referred to it in rapturous words, such as, "This is life—this is heaven—God is love—I need not faith—I have the promise!" It is easy to attribute such expressions to delirium; but that does not alter their character, nor the reality of the state of soul which produces them. Whether a dying man can maintain any continued attention to things through his senses, we need not inquire. It is enough for him if, in the spirit, he possess the peace and joy of believing. Testimony to this degree of triumph may be found wherever the doctrines of the Savior have been received and practiced. The instance of Sir James Mackintosh is, perhaps, worthy of especial notice—because he lived like a philosopher, but died like a Christian. Not long before he ceased to speak, his daughter said to him, "Jesus loves you." He answered slowly, pausing between each word, "Jesus Christ—love—the same thing!" after a long silence, he said, "I believe!" She asked, "In God?" he answered, "In Jesus." On her inquiring how he felt, his last word was, "Happy!"

> "And is this death?—Dread thing!—
> If such thy visiting,
> How beautiful thou art!"

The philosophy which fails to find her desired substitute for religion, also fails to prove that there is any absurdity in believing in those ministrations of angels which Christianity intimates, and which are most likely to be experienced by the spirit of man when on the confines of eternity. In the pause of unutterable desire, the soul forgets the body; and it is then that spirits some slight remove above us perceive our need, and by divine appointment confer on us the comfort of their light by impressing on us a deeper knowledge of the

intentions of Deity, and a brighter insight of his love to ourselves and to all men. Thus worlds above worlds of varied intelligence are bound together in the communion of necessity and assistance.

There is no degradation in our physical existence unless from depravity of the will; but the proof of our natural disgrace is death, since it demonstrates the forfeiture of our qualifications to act as Heaven's vicegerents over the lower creation. A full restitution of our rights is the end and object of the Christian religion; for He who came to vindicate the Eternal Father brought with Him a regenerating faculty for all who desire to receive it. When, therefore, He says, "Thy sins are forgiven," He also says, "Be thou healed;" for perfect health is complete salvation; but He adds, "Go in peace; thy faith hath saved thee." Now, what is faith — true faith? It is to feel that He who introduced us to earthly life guides us to the heavenly, and is nearer to us than our own flesh, since he gives us a consciousness of a higher world and a happy eternity, to the fullness of which we cheerfully pass on. It is the belief of the soul that God acts *with* it, because will is power, and because He has imparted to faith an authority to convert a sinful creature into a son of God. But there is a faith that works not by love. That, too, though but as a minute seed, can remove mountains, yet it can do no good: its operation in any heart creates a hell. Both kinds of faith have one parent—knowledge; but yet both faith and knowledge may be purely scientific, or truly Satanic. The scientific, truly so called, trusts God—the Satanic trusts nothing. The former belongs to religion, being set upon attaining a coincidence with the divine mind; the latter seeks no end but the gratification of a self-hood that wills not to be reckoned as an integral part of an infinite whole. This separate self enjoys not any thing, merely because it can not possess all; and it

trembles to the core from a consciousness of being filled with desires altogether opposed to the plan of Heaven, which is, that happiness shall only be imparted through obedience to that love which unites in one harmony all the elements and all the intelligences of every holy world. "*Turpis universo non congruens*," wisely says the strong-hearted Augustin, since every soul that is out of keeping with divine order must remain, in the license of a perverse will, forever vile, until restored to the dominion of truth by the attractiveness of light and the miseries of darkness. Beauty and happiness—in one word, holiness—are essential to the wisdom and power of Perfect Intelligence; and those who trust in His ready hand and manifest goodness, shall feel His might within them effectuating their full deliverance from all infirmity both of flesh and of spirit; so that they shall rejoice unspeakably in the brightness of His glory, and feel themselves to be hallowed, and lovely, and blessed in Him, and with Him, forever.

THE END

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